حمل الآن

مجانا وحصريا

المراجعة رقم (1)













First term Questions Bank



Question 01 — choose the corret answer — unit 1

1. Adaptation helps the living organism in all the following characters, except..............
   - (a) surviving
   - (b) reproduction
   - (c) hiding
   - (d) death

2. Penguin's feet have blood vessels that bring .... up from its feet towards its body
   - (a) warm blood
   - (b) cold blood
   - (c) warm water
   - (d) cold water

3. One of the adaptations that helps the animal to protect itself from enemies ....
   - (a) camouflage
   - (b) extinction
   - (c) digestion
   - (d) reproduction

4. ....is considered as a behavioral adaptation in living organisms
   - (a) long ears
   - (b) living in burrows
   - (c) big eyes
   - (d) countershading

5. ....is considered as a structural adaptation in living organisms
   - (a) birds migration
   - (b) panting
   - (c) brown fur
   - (d) Puff its body with air

6. The following animals are structurally adapted to live in polar regions, except ......
   - (a) penguin
   - (b) fennec fox
   - (c) arctic fox
   - (d) polar bear

7. When a panther chameleon stands on leaves of trees, the color of its scales changes into......
   - (a) white
   - (b) green
   - (c) blue
   - (d) black

8. The fur of fennec fox protect it from.........
   - (a) wind
   - (b) rains
   - (c) hot weather
   - (d) cold weather

9. The body of arctic fox covered with ....
   - (a) skin
   - (b) thick fur
   - (c) feathers
   - (d) scales

10. All of the following properties help arctic fox to stay warm, except....
    - (a) thick fur coat
    - (b) short ears
    - (c) tan-colored coat
    - (d) short legs



11. Bull sharks can live in ....

ⓐ fresh water only ⓑ salt water only ⓒ seas, rivers and mud ⓓ rivers, seas and oceans.

12. fennec fox has a tan- colored coat that provides .... in its environment

ⓐ camouflage ⓑ respiration ⓒ panting ⓓ communication

13. One of the structural adaptations of water lily plant is that it has ....

ⓐ long roots ⓑ sharp spines ⓒ tiny leaves ⓓ wide leaves

14. .... passes the food from pharynx to stomach.

ⓐ Esophagus ⓑ Stomach ⓒ Trachea ⓓ Alveoli

15. Digestion process begins in the ....

ⓐ stomach ⓑ esophagus ⓒ mouth ⓓ small intestine

16. The food moves into the stomach through the ....

ⓐ esophagus ⓑ trachea ⓒ small intestine ⓓ tongue

17. Crushing the food in your mouth is the function of ....

ⓐ stomach ⓑ tongue ⓒ saliva ⓓ teeth

18. The undigested food pass from the small intestine into the ....

ⓐ liver ⓑ pancreas ⓒ brain ⓓ large intestine.

19. Fish extracts oxygen out of the water by ......

ⓐ skin ⓑ gills ⓒ lungs ⓓ fins

20. When exposing to danger, the ....system helps to recognize it and avoid it

ⓐ Circulatory ⓑ digestive ⓒ respiratory ⓓ nervous

21. Which of the following can turn its head in all directions?

ⓐ lizards ⓑ owls ⓒ cats ⓓ cow

22. Bats use their .... to get information about their surroundings in the dark.

ⓐ nose ⓑ tongue ⓒ eyes ⓓ ears

23. All of the following are components of nervous system, except ....

ⓐ spinal cord ⓑ heart ⓒ nerves ⓓ brain

24. Sense organ collect information and send signals to............ for processing and understanding
   (a) hands (b) legs (c) brain (d) stomach

25. .... use echolocation by bouncing high-pitched sounds in the air.
   (a) Bats (b) Dolphins (c) Whales (d) Snakes

26. The organ that is responsible for the sense of sight is ....
   (a) ear (b) tongue (c) nose (d) Eye

27. From transparent objects...................
   (a) metals (b) lens (c) mirror (d) Wood

28. Reading and writing are common types of communication in..... world
   (a) humans (b) animals (c) birds (d) Plants

29. Rock and wood are .... materials.
   (a) opaque (b) transparent (c) liquids (d) gaseous

30. Animals can communicate with each other through.....................
   (a) sound and light (b) eating (c) writing (d) Reading

Question 02 put (true) or (false)

1. Thick white fur is an adaptation in bears that live in polar regions ( )
2. The feet of the penguin do not freeze because they have layer of fat. ( )
3. Black bears have dark fur to hide among trees. ( )
4. The ears of arctic fox are longer than those of fennec fox ( )
5. All type of sharks live in fresh water ( )
6. Living organisms can adapt their environmental conditions through structural adaptation and behavioral adaptation ( )
7. The behavioral adaptation is a change in the body structure of a living organism to survive. ( )
8. Mangrove trees adapt to resist the water waves through their long, strong roots. ( )
9. Plants have structural adaptation only to help them survive and grow in different environments. ( )

10. One of the structural adaptations of acacia tree is that it has large, wide roots called buttress roots ( )
11. Hand-shaped leaves of kapok tree is considered as a behavioral adaptation. ( )
12. The stomach is an important organ in the digestive system ( )
13. Digestion process begins in the stomach with the help of saliva. ( )
14. The food passes through the large intestine before it goes into the small intestine ( )
15. We eat food to obtain energy. ( )
16. Esophagus is an important organ in the respiratory system ( )
17. The lungs are important organ in the respiratory system ( )
18. The diaphragm is an important organ in the digestive system ( )
19. Amphibians include frogs and salamanders ( )
20. The sense of hearing of dolphin is stronger than human ( )
21. Your sense of hearing allows you to see the light of flashlight ( )
22. The heart is an important organ in the nervous system ( )
23. The brain responsible for processing information ( )
24. Bats use their sense of smell to avoid dangers. ( )
25. Whales can communicate with each other by using songs. ( )
26. Light travels in straight lines. ( )
27. Both human and animal need light to see. ( )
28. Nocturnal animals have eyes larger than human. ( )
29. Wood is a transparent object that allows light to pass through it ( )
30. Speaking, writing are ways to communicate with people. ( )

Question 03 complete

1. penguin's body can keep warm through a thick layer of ...... and dense......
2. Type of adaptation that some animals use to hide from their predators or preys is known as ....

3. Forest bears have .... or .... colored fur, while polar bears have .... colored fur.
4. The long ears of the fennec fox are example of .... adaptation.
5. Eyes of chameleon move independently of each other; this is considered as .... adaptation.
6. Short ears of arctic fox are considered .... adaptation, while its staying in burrows to be warm is considered .... adaptation.
7. .... tree has taproot to search for water.
8. .... tree has long and strong roots to resist water waves.
9. The hand-shaped leaves of kapok tree allow .... to flow through them gently.
10. The leaves of water lilies are wide in order to .... on the water surface and to absorb a large amount of ....
11. Air enters and exits the human body through .... system.
12. During inhalation, air travels down from your throat to your lungs through ....
13. Humans use .... to breathe, while fish use .... to breathe.
14. Fish breath .... gas which dissolved in water.
15. Fish have .... to breathe.
16. Starred agama lizard is a ...., while frog is an ....
17. The dolphin has sharp sense of ....
18. .... and .... are from sharp senses in owls.
19. .... is the main control center in the body
20. Blind people can locate his friend by .... sense.
21. Humpback whales communicate with each other with their .... senses
22. .... ants are responsible for sending smelly message when amount of food decreases
23. The form energy that can be seen is .... energy.
24. Light travels in .... lines.
25. .... is the organ that we can use to receive light.
26. Fireflies use the sense of .... to communicate with each other.

27. Fireflies communicate with each other by producing a ....
28. .... is an opaque object.
29. .... is considered an example for transparent materials.
30. water is .... materials and you can see things through them

Question 04 write scientific term for each of the following

1. It covers the body of some types of bears to blend in with snow and keeps their bodies warm. (   )
2. A type of adaptation that helps the living organism to blend in with the surrounding environment (   )
3. A reptile that its body is covered by colored scales and has V-shaped feet. (   )
4. A type of foxes has a tan-colored fur. (   )
5. It covers the body of some bears to keep warm and blend in snow. (   )
6. The fox that has extra-large ears to lose its heat (   )
7. A structural adaptation that fixes the kapok tree in soggy soil and support its trunk (   )
8. It is a tree that is found in snow and has a triangle shape. (   )
9. An organ through which solid wastes of digestion leave the body. (   )
10. A process of breaking down food into smaller parts that the body cells absorb and use to get energy and grow. (   )
11. A large muscle that contracts during breathing in and relaxes during breathing out (   )
12. It allows the air to pass from the nose to the trachea. (   )
13. A gas presents in air and water, and is very important for breathing process (   )
14. A system that controls all the body functions, and nerves are one of its parts. (   )
15. An animal that can turn its head backwards, anh has a bowl-shaped face and large eyes (   )
16. The time taken by an organism's body to respond to different reactions (   )

17. A group of ants which is responsible for sending smelly messages when there is a shortage of food. ( )
18. Ants send a smelly message to alert the ants where to find the food. ( )
19. A tool used by the man works as the eyes of fishing cats at night. ( )
20. Objects that emit their own light. ( )
21. A body that appears lighted in the sky, but it is not considered as a source of light. ( )
22. The object which allows light to pass through it ( )
23. It is a pattern that has meaning ( )
24. It is a code that use symbols in a pattern to give a specific meaning according to the arrangement of letter in a word ( )
25. It is a code in form of sounds used to transfer information ( )

Question 05 Give Reason for each of the following

1. Fennec fox has sandy-colored fur

....

2. The polar bear has thick white fur.

....

3. The body of chameleon is covered with colored scales.

....

4. Fennec fox has extra-large ears, while arctic fox has short ears.

....

5. Panther chameleon has V-shaped feet and a long tail.

....

6. Mangrove tree has long and strong roots.

....

7. Kapok tree has hand-shaped leaves

....

8 Water lilies have wide floating leaves.

....

9 Barbary fig has sharp spines.

....

10 The inhaled air differs from the exhaled air.

....

11 Gills are unique structural adaptation in fish

....

12 Owls can hunt during the night

....

13 Dolphine cah hear all kinds of sound

....

14 Bats can't see in the dark, but they can hunt their prey at night

....

15 Fishing cat eyes glow in the dark

....

16 Sun is considered a source of light

....

17 Moon is not considered as a source of light

....

18 We can see objects when light fall on it

....

19 A mirror can reflect light better than a painted surface.

....

20 A shadow is formed when light falls on an opaque object.

....

Question 06 What happens if ?

1. Animals can't adapt in their environment.
2. The polar bear has thin fur instead of its thick fur
3. Diaphragm moves up in respiration process (during exhalation)
4. The diaphragm muscle contracts and moves down.
5. When the light falls on a smooth and shiny surface as mirror
6. The light falls on a rough surface. (Related to reflection of light rays).
7. Light fall on transparent object as glass window
8. When firefly wants to attract a mate to reproduce?
9. The traffic light becomes red while you are going to cross road

Question 07 cross the odd word

1. Penguin - Fennec fox - Polar bear - Arctic fox ( )
2. Penguin - Polar bear - Snake - Arctic Fox. ( )
3. Nose - Throat - Trachea - Anus. ( )
4. Nose - Trachea - Stomach - Lungs. ( )
5. Fire - The moon - The Sun - The light bulb. ( )
6. Wood. Glass cup-Book-Wall ( )

Question 01 choose the corret answer unit 2

1. When an object is in motion, this means that its ....changes
   - a) color
   - b) shape
   - c) size
   - d) position

2. When you move something towards you, this represents......
   - a) pushing force
   - b) light energy
   - c) pulling force
   - d) sound energy

3. Push or pull actions are considered as types of ....
   - a) force
   - b) device
   - c) energy
   - d) adaptation

4. Which of the following will cause an object to move?
   - a) balanced forces
   - b) unbalanced forces
   - c) sound energy
   - d) light energy

5. All of the following are examples of motion, except ....
   - a) running person
   - b) ball travelling through air
   - c) flying bird
   - d) sleeping dog

6. When you throw a ball in the air, the gravity will make it move ......
   - a) upward
   - b) forward
   - c) downward
   - d) backward

7. The force that occurs when an object rubs against another object is called.........
   - a) friction
   - b) gravity
   - c) push
   - d) pull

8. When the force acting on a moving body increases, its speed will ......
   - a) increase
   - b) decrease
   - c) remain constant
   - d) stop

9. The force that slows down (decreases) the speed is called ....
   - a) push
   - b) gravity
   - c) friction
   - d) pull

10. There is a .... force between the car tires and the road that acts to decrease car's speed gradually.
    - a) gravity
    - b) pulling
    - c) pushing
    - d) friction

11. .... is the ability to do work or make a change.
    - a) Speed
    - b) Work
    - c) Energy
    - d) Displacement

12. The form of energy that can be seen is .... energy.
    - a) thermal
    - b) electrical
    - c) sound
    - d) light



13. In the electric lamp, electrical energy is changed into .... energy
 a) sound b) chemical c) light d) potential

14. The energy that is stored in an object due to its position, is known as .... energy.
 a) kinetic b) potential c) electrical d) chemical

15. The energy gained by a ball when it falls from above is .... energy
 a) Potential b) kinetic c) light d) chemical

16. Electric heater produces .... energy.
 a) kinetic b) thermal c) electric d) chemical

17. Chemical energy stored in batteries is considered a form of .... energy
 a) potential b) kinetic c) heat d) light

18. Chemical energy can be stored in ....
 a) food only b) battery only c) television and food d) food and battery

19. The force that causes an object to move a distance is called ....
 a) work b) potential c) gravity d) pull

20. A ball at the top of the hill stores .... energy
 a) potential b) sound c) kinetic d) heat

21. How can we calculate the speed of an object?
 a) distance ÷ time b) distance + time c) distance x time d) distance - time

22. Which of the following is a measuring unit of speed?
 a) hr/km b) sec/m c) kg/sec d) m/sec

23. The airbag is made of.....................
 a) carton b) nylon c) rubber d) cotton

24. Kinetic energy isn't affected by the ....
 a) mass b) speed c) color d) weight

25. Speed is a measurement of how .... something is moving.
 a) long b) fast c) tall d) much

26. Collisions usually produce ....energy
 a) solar b) sound c) gravitational d) chemical




27. When a car that moves forward stops suddenly, the passengers move ...
   a) backward b) forward c) upward d) downward

Question 02 put (true) or (false)

1. Air resists the motion of a car. ( )
2. Pushing force of gravity makes the ball falls down after throwing it in air ( )
3. The balanced forces cause the object to move. ( )
4. Hitting a tennis ball needs a pulling force ( )
5. When a pen falls down from your hand, the acting force is the gravity. ( )
6. Unbalanced forces cause a change in the object position ( )
7. Objects fall down to the Earth due to friction force. ( )
8. When a car crashes into a wall, it will not stop. ( )
9. When a car runs out of fuel on a flat road, its speed increases gradually until it stops. ( )
10. Any moving object has a form of energy known as kinetic energy ( )
11. When the roller coaster slides down fast, its kinetic energy increases ( )
12. The moving objects only have energy, while the objects that don't move have no energy ( )
13. When you kick a ball, kinetic energy is produced ( )
14. As the height of an object from the Earth's surface increases, its potential energy decreases ( )
15. In the electric fan, the kinetic energy is converted into electric energy. ( )
16. We can see the movement of electricity through a wire. ( )
17. From the examples of kinetic energy, the bird which stays in its nest. ( )
18. Energy can be changed from one form to another. ( )
19. Potential energy is the energy of moving body. ( )
20. Thermal energy is an example of kinetic energy. ( )
21. Energy is the ability to do work. ( )
22. Seatbelt is one of safety equipment in cars. ( )



23. After collision, the air bag deflates the same speed as it inflates. ( )
24. Drivers should drive as fast as possible to avoid accidents. ( )
25. The high-speed moving objects face less dangers than the slower objects. ( )
26. The mass of a moving body affects its speed. ( )
27. As the speed increases, the amount of fuel used decreases. ( )
28. We can measure the covered distance in kilometer unit. ( )
29. Kilogram is the measuring unit of speed ( )
30. Speed and mass are factor that affect the kinetic energy of a moving object ( )

Question 03 complete

1. .... is the ability to do work.
2. If the mass of an object decreases this mean its kinetic energy ....
3. In gas oven, ... energy changes into .... energy.
4. In electric heater, ... energy changes into .... energy.
5. In electric bell, electrical energy changes into .... energy.
6. The energy that is stored in an object is called .... energy.
7. Airbags absorbs the .... of the car during collision.
8. When objects collide with each other, ... is transferred between them.
9. .... is a safety equipment that is used to prevent car passengers from moving forward when the car stops suddenly.
10. When the speed of an object increases, its kinetic energy ....
11. During a car crash, ... is inflated with a gas to provide a soft cushion.

Question 04 write scientific term for each of the following

1. A force that you make to move an object away from you ( )
2. One of the fastest and most powerful trucks in the world ( )
3. It is a push or pull that is applied to an object cause it to change its position ( )
4. The force that pulls objects toward the center of the earth ( )

5. A change in the position of an object relative to a fixed starting point ( )
6. The energy that the object gains due to its motion ( )
7. It is the ability to do work ( )
8. It is a force that causes an object to move a distance ( )
9. The form of energy that increases when the speed of an object increases ( )
10. The stored energy in an object due to its position ( )
11. The process in which two objects or more crash into each other and includes an energy. ( )
12. Safety equipment used to prevent car passengers from moving forward when the car stops suddenly. ( )
13. Safety equipment provide a soft cushion, when it inflates automatically with a gas during collision. ( )
14. A heavy steel ball that swings on a cable and it is used in destruction of buildings parts. ( )

Question 05 Give Reason for each of the following

1. The shockwave truck is faster than the normal truck
....
2. Engineers use parachutes in shockwave truck
....
3. If you let a pen out of your hand, it falls to the ground
....
4. When you stop pedalling during movement of your bicycle, it slows down until it stops
....
5. Electric lamp produces different forms of energy
....
6. You switch on an electric lamp
....
7. Airbag deflates after seconds of collision.
....



Question 06 What happens if ?

1. The shockwave driver opens the parachutes
2. You let your toy out of your hand
3. A car runs of fuel on a flat road
4. A roller coaster moves from up to down
5. You operate a washing machine
6. You switch on an electric lamp
7. The speed of a car increases. (according to its kinetic energy).
8. When the mass of a moving body increases, as it moves down wards along a ramp. (According to the kinetic energy)

Question 07 cross the odd word

1. Sound energy - light energy - thermal energy - chemical energy

Question 08 Answer the following questions

1. Mention some of the safety equipment in the car?

2. Find speed of a runner, if you know that he covers 400 meters in 8 seconds.

3. A train travels from Cairo to Alexandria in a distance of 200 kilometers in 2 hours, Find its speed.

تم بحمد الله

بسم الله الرحمن الرحيم " إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ إِنَّا لَا نُضِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلًا " صدق الله العظيم



الاجابات



First term Questions Bank



Question 01 choose the corret answer **unit 1**

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2. Penguin's feet have blood vessels that bring .... up from its feet towards its body
   - (a) warm blood (b) **cold blood** (c) warm water (d) cold water
3. One of the adaptations that helps the animal to protect itself from enemies ....
   - (a) **camouflage** (b) extinction (c) digestion (d) reproduction
4. ....is considered as a behavioral adaptation in living organisms
   - (a) long ears (b) **living in burrows** (c) big eyes (d) countershading
5. ....is considered as a structural adaptation in living organisms
   - (a) birds' migration (b) panting (c) **brown fur** (d) Puff its body with air
6. The following animals are structurally adapted to live in polar regions, except ......
   - (a) penguin (b) **fennec fox** (c) arctic fox (d) polar bear
7. When a panther chameleon stands on leaves of trees, the color of its scales changes into......
   - (a) white (b) **green** (c) blue (d) black
8. The fur of fennec fox protect it from.........
   - (a) wind (b) rains (c) **hot weather** (d) cold weather
9. The body of arctic fox covered with ....
   - (a) skin (b) **thick fur** (c) feathers (d) scales
10. All of the following properties help arctic fox to stay warm, except....
    - (a) thick fur coat (b) short ears (c) **tan-colored coat** (d) short legs

11. Bull sharks can live in ....

ⓐ fresh water only ⓑ salt water only ⓒ seas, rivers and mud ⓓ rivers, seas and oceans.

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16. The food moves into the stomach through the ....

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17. Crushing the food in your mouth is the function of ....

ⓐ stomach ⓑ tongue ⓒ saliva ⓓ teeth

18. The undigested food pass from the small intestine into the ....

ⓐ liver ⓑ pancreas ⓒ brain ⓓ large intestine.

19. Fish extracts oxygen out of the water by ......

ⓐ skin ⓑ gills ⓒ lungs ⓓ fins

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21. Which of the following can turn its head in all directions?

ⓐ lizards ⓑ owls ⓒ cats ⓓ cow

22. Bats use their .... to get information about their surroundings in dark.

ⓐ nose ⓑ tongue ⓒ eyes ⓓ ears

23. All of the following are components of nervous system, except ....

ⓐ spinal cord ⓑ heart ⓒ nerves ⓓ brain

24. Sense organ collect information and send signals to........... for processing and understanding.

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25. .... use echolocation by bouncing high-pitched sounds in the air.

(a) Bats (b) Dolphins (c) Whales (d) Snakes

26. The organ that is responsible for the sense of sight is ....

(a) ear (b) tongue (c) nose (d) eye

27. From transparent objects..................

(a) metals (b) lens (c) mirror (d) Wood

28. Reading and writing are common types of communication in ...... world

(a) humans (b) animals (c) birds (d) Plants

29. Rock and wood are .... materials.

(a) opaque (b) transparent (c) liquids (d) gaseous

30. Animals can communicate with each other through.....................

(a) sound and light (b) eating (c) writing (d) Reading

Question 02 put (true) or (false)

1. Thick white fur is an adaptation in bears that live in polar regions ✓
2. The feet of the penguin do not freeze because they have a layer of fat. ✗
3. Black bears have dark fur to hide among trees. ✓
4. The ears of arctic fox are longer than those of fennec fox ✗
5. All type of sharks live in fresh water ✗
6. Living organisms can adapt their environmental conditions through structural adaptation and behavioral adaptation ✓
7. The behavioral adaptation is a change in the body structure of a living organism to survive. ✗
8. Mangrove trees adapt to resist the water waves through their long, strong roots. ✓
9. Plants have structural adaptation only to help them survive and grow in different environments. ✗

10. One of the structural adaptations of acacia tree is that it has large, wide roots called buttress roots ✗
11. Hand-shaped leaves of kapok tree is considered as a behavioral adaptation. ✗
12. 📖 The stomach is an important organ in the digestive system ✓
13. Digestion process begins in the stomach with the help of saliva. ✗
14. The food passes through the large intestine before it goes into the small intestine ✗
15. We eat food to obtain energy. ✓
16. 📖 Esophagus is an important organ in the respiratory system ✗
17. 📖 The lungs are important organ in the respiratory system ✓
18. 📖 The diaphragm is an important organ in the digestive system ✗
19. Amphibians include frogs and salamanders ✓
20. 📖 The sense of hearing of dolphin is stronger than human ✓
21. 📖 Your sense of hearing allows you to see the light of flashlight ✗
22. 📖 The heart is an important organ in the nervous system ✗
23. The brain responsible for processing information ✓
24. Bats use their sense of smell to avoid dangers. ✗
25. Whales can communicate with each other by using songs. ✓
26. Light travels in straight lines. ✓
27. Both human and animal need light to see. ✓
28. 📖 Nocturnal animals have eyes larger than human. ✓
29. Wood is a transparent object that allows light to pass through it ✗
30. Speaking, writing are ways to communicate with people. ✓

Question 03 complete

1. The penguin's body can keep warm through a thick layer of fat and dense feathers
2. Type of adaptation that some animals use to hide from their predators or preys is known as camouflage

3. Forest bears have black or brown colored fur, while polar bears have white colored fur.
4. The long ears of the fennec fox are example of structural adaptation.
5. Eyes of chameleon move independently of each other; this is considered as structural adaptation.
6. Short ears of arctic fox is considered structural adaptation, while its staying in burrows to be warm is considered behavioral adaptation.
7. Acacia tree has taproot to search for water.
8. Mangrove tree has long and strong roots to resist water waves.
9. The hand-shaped leaves of kapok tree allow wind to flow through them gently.
10. The leaves of water lilies are wide in order to float on the water surface and to absorb a large amount of sunlight
11. Air enters and exits the human body through respiratory system.
12. During inhalation, air travels down from your throat to your lungs through trachea
13. Humans use lungs to breathe, while fish use gills to breathe.
14. Fish breath oxygen gas which dissolved in water.
15. Fish have gills to breathe.
16. Starred agama lizard is a reptile, while frog is an amphibian
17. The dolphin has sharp sense of hearing
18. Sight and hearing are from sharp senses in owls.
19. brain is the main control center in the body
20. Blind people can locate his friend by hearing sense.
21. Humpback whales communicate with each other with their hearing senses.
22. Nurse ants are responsible for sending smelly message when amount of food decreases
23. The form energy that can be seen is light energy.
24. Light travels in straight lines.
25. eye is the organ that we can use to receive light.
26. Fireflies use the sense of sight to communicate with each other.

27. Fireflies communicate with each other by producing a light
28. wood is an opaque object.
29. Air is considered an example for transparent materials.
30. water is transparent materials and you can see things through them

Question 04 write scientific term for each of the following

1. It covers the body of some types of bears to blend in with snow and keeps their bodies warm. — Thick white fur
2. A type of adaptation that helps the living organism to blend in with the surrounding environment — camouflage
3. A reptile that its body is covered by colored scales and has V-shaped feet. — Panther chameleon
4. A type of foxes has a tan-colored fur. — Fennec fox
5. It covers the body of some bears to keep warm and blend in snow. — Thick white fur
6. The fox that has extra-large ears to lose its heat — fennec fox
7. A structural adaptation that fixes the kapok tree in soggy soil and support its trunk — Buttress root
8. It is a tree that is found in snow and has a triangle shape. — Pine tree
9. An organ through which solid wastes of digestion leave the body. — Anus
10. A process of breaking down food into smaller parts that the body cells absorb and use to get energy and grow. — Digestion process
11. A large muscle that contracts during breathing in and relaxes during breathing out — Diaphragm
12. It allows the air to pass from the nose to the trachea. — Throat (pharynx)
13. A gas presents in air and water, and is very important for breathing process — Oxygen gas
14. A system that controls all the body functions, and nerves are one of its parts. — Nervous system
15. An animal that can turn its head backwards, anh has a bowl-shaped face and large eyes — Owl

16	The time taken by an organism's body to respond to different reactions	reaction time
17	A group of ants which is responsible for sending smelly messages when there is a shortage of food.	nurse ants
18	Ants send a smelly message to alert the ants where to find the food.	Scout ants
19	A tool used by the man works as the eyes of fishing cats at night.	night vision goggles
20	Objects that emit their own light.	Sources of light
21	A body that appears lighted in the sky, but it is not considered as a source of light.	The moon
22	The object which allows light to pass through it	transparent object
23	It is a pattern that has meaning	Code
24	It is a code that use symbols in a pattern to give a specific meaning according to the arrangement of letter in a word	writing
25	It is a code in form of sounds used to transfer information	language

Question 05 Give Reason for each of the following

1. Fennec fox has sandy-colored fur
   Fennec fox has a sandy- colored fur to blend in with the desert

2. The polar bear has thick white fur.
   Thick fur to stay warm
   white fur to blend in with snow

3. The body of chameleon is covered with colored scales.
   To make camouflage

4. Fennec fox has extra-large ears, while arctic fox has short ears.
   Extra-large ears help fennec fox to lose heat and cool its body, arctic fox has short ears to stay warm

5. Panther chameleon has V-shaped feet and a long tail.
   To hold the branches of trees

(6) Mangrove tree has long and strong roots.
To resist the water waves

(7) Kapok tree has hand-shaped leaves
To allow wind to move gently through them without tearing leaves

(8) Water lilies have wide floating leaves.
To absorb a large amount of sunlight – to float on water

(9) Barbary fig has sharp spines.
To prevent animals from eating its fruits and leaves

(10) The inhaled air differs from the exhaled air.
Inhaled air rich in oxygen gas, exhaled air rich in carbon dioxide gas

(11) Gills are unique structural adaptation in fish.
Fish use gills to respire oxygen under water

(12) Owls can hunt during the night
Because owl is nocturnal animals with sharp hearing sense it use echolocation to find prey

(13) Dolphine cah hear all kinds of sound
Because dolphine have super sense of hearing and depend on hearing to locate objects

(14) Bats can't see in the dark, but they can hunt their prey at night
Because they depend on echolocation to locate (find) their prey at night

(15) Fishing cat eyes glow in the dark
because it has a mirror-like membrane at the back of its eyes which reflect light

(16) Sun is considered a source of light
Because it emits light

(17) Moon is not considered as a source of light
Because it reflects sun light.

(18) We can see objects when light fall on it
Because of light reflection

19. A mirror can reflect light better than a painted surface.
Because the mirror is more smooth than the painted surface

20. A shadow is formed when light falls on an opaque object.
Because opaque object doesn't allow light to pass through

Question 06 — What happens if ?

1. Animals can't adapt in their environment.
They cannot survive and reproduce

2. The polar bear has thin fur instead of its thick fur
It cannot adapt in its cold environment

3. Diaphragm moves up in respiration process (during exhalation)
air rich in carbon dioxide comes out of the lungs, size of chest decrease

4. The diaphragm muscle contracts and moves down.
the air rich in oxygen enter the lung, the size of chest increases

5. When the light falls on a smooth and shiny surface as mirror
Light rays will reflect in one direction.

6. The light falls on a rough surface. (Related to reflection of light rays).
Light rays will reflect in different directions.

7. Light fall on transparent object as glass window
Light will pass through it and I can see objects through it

8. When firefly wants to attract a mate to reproduce?
It produces a chemical reaction inside its body to light up

9. The traffic light becomes red while you are going to cross road
The eyes send a message to brain – brain process information
(stop walking)



Question 07 cross the odd word

1. Penguin - Fennec fox - Polar bear - Arctic fox — Fennec fox
2. Penguin - Polar bear - Snake - Arctic Fox. — Snake
3. Nose - Throat - Trachea - Anus. — Anus
4. Nose - Trachea - Stomach - Lungs. — stomach
5. Fire - The moon - The Sun - The light bulb. — moon
6. Wood. Glass cup-Book-Wall — Glass cup

Question 01 choose the corret answer — unit 2

1. When an object is in motion, this means that its ....changes
   - a) color
   - b) shape
   - c) size
   - d) position
2. When you move something towards you, this represents......
   - a) pushing force
   - b) light energy
   - c) pulling force
   - d) sound energy
3. Push or pull actions are considered as types of ....
   - a) force
   - b) device
   - c) energy
   - d) adaptation
4. Which of the following will cause an object to move?
   - a) balanced forces
   - b) unbalanced forces
   - c) sound energy
   - d) light energy
5. All of the following are examples of motion, except ....
   - a) running person
   - b) ball travelling through air
   - c) flying bird
   - d) sleeping dog
6. When you throw a ball in the air, the gravity will make it move ......
   - a) upward
   - b) forward
   - c) downward
   - d) backward
7. The force that occurs when an object rubs against another object is called.........
   - a) friction
   - b) gravity
   - c) push
   - d) pull

8. When the force acting on a moving body increases, its speed will ......

ⓐ increase ⓑ decrease ⓒ remain constant ⓓ stop

9. The force that slows down the speed is called ....

ⓐ push ⓑ gravity ⓒ friction ⓓ pull

10. There is a .... force between the car tires and the road that acts to decrease car's speed gradually.

ⓐ gravity ⓑ pulling ⓒ pushing ⓓ friction

11. .... is the ability to do work or make a change.

ⓐ Speed ⓑ Work ⓒ Energy ⓓ Displacement

12. The form of energy that can be seen is .... energy.

ⓐ thermal ⓑ electrical ⓒ sound ⓓ light

13. In the electric lamp, electrical energy is changed into .... energy

ⓐ sound ⓑ chemical ⓒ light ⓓ potential

14. The energy that is stored in an object due to its position, is known as .... energy.

ⓐ kinetic ⓑ potential ⓒ electrical ⓓ chemical

15. The energy gained by a ball when it falls from above is .... energy

ⓐ Potential ⓑ kinetic ⓒ light ⓓ chemical

16. Electric heater produces .... energy.

ⓐ kinetic ⓑ thermal ⓒ electric ⓓ chemical

17. Chemical energy stored in batteries is considered a form of .... energy

ⓐ potential ⓑ kinetic ⓒ heat ⓓ light

18. Chemical energy can be stored in ....

ⓐ food only ⓑ battery only ⓒ television and food ⓓ food and battery

19. The force that causes an object to move a distance is called ....

ⓐ work ⓑ potential ⓒ gravity ⓓ pull

20. A ball at the top of the hill stores .... energy

ⓐ potential ⓑ sound ⓒ kinetic ⓓ heat

21. How can we calculate the speed of an object?

ⓐ distance ÷ time ⓑ distance + time ⓒ distance x time ⓓ distance - time

22. Which of the following is a measuring unit of speed?

ⓐ hr/km ⓑ sec/m ⓒ kg/sec ⓓ m/sec

23. The airbag is made of.....................

ⓐ carton ⓑ nylon ⓒ rubber ⓓ cotton

24. Kinetic energy isn't affected by the ....

ⓐ mass ⓑ speed ⓒ color ⓓ weight

25. Speed is a measurement of how .... something is moving.

ⓐ long ⓑ fast ⓒ tall ⓓ much

26. Collisions usually produce ....energy

ⓐ solar ⓑ sound ⓒ gravitational ⓓ chemical

27. When a car that moves forward stops suddenly, the passengers move ...

ⓐ backward ⓑ forward ⓒ upward ⓓ downward

Question 02 put (true) or (false)

1. Air resists the motion of a car. ✓
2. Pushing force of gravity makes the ball falls down after throwing it in air ✗
3. The balanced forces cause the object to move. ✗
4. Hitting a tennis ball needs a pulling force ✗
5. When a pen falls down from your hand, the acting force is gravity ✓
6. Unbalanced forces cause a change in the object position ✓
7. Objects fall down to the Earth due to friction force. ✗
8. When a car crashes into a wall, it will not stop. ✗
9. When a car runs out of fuel on a flat road, its speed increases gradually until it stops. ✗
10. Any moving object has kinetic energy ✓
11. When the roller coaster slides down fast, its kinetic energy increases ✓
12. The moving objects only have energy, while the objects that don't move have no energy ✗
13. When you kick a ball, kinetic energy is produced ✓

(14) As the height of an object from the Earth's surface increases, its potential energy decreases ✗

(15) In the electric fan, the kinetic energy is converted into electric energy. ✗

(16) We can see the movement of electricity through a wire. ✗

(17) From the examples of kinetic energy, the bird which stays in its nest. ✗

(18) Energy can be changed from one form to another. ✓

(19) Potential energy is the energy of moving body. ✗

(20) Thermal energy is an example of kinetic energy. ✓

(21) Energy is the ability to do work. ✓

(22) Seatbelt is one of safety equipment in cars. ✓

(23) After collision, the air bag deflates the same speed as it inflates. ✓

(24) Drivers should drive as fast as possible to avoid accidents. ✗

(25) The high-speed moving objects face less dangers than the slower objects. ✗

(26) The mass of a moving body affects its speed. ✓

(27) As the speed increases, the amount of fuel used decreases. ✗

(28) We can measure the covered distance in kilometer unit. ✓

(29) Kilogram is the measuring unit of speed ✗

(30) Speed and mass are factor that affect the kinetic energy of a moving object ✓

Question 03 complete

(1) Energy is the ability to do work.

(2) If the mass of an object decreases this mean that its kinetic energy decrease

(3) In gas oven, chemical energy changes into thermal energy.

(4) In electric heater, electric energy changes into thermal energy.

(5) In electric bell, electrical energy changes into sound energy.

(6) The energy that is stored in an object is called potential energy.

(7) Airbags absorbs the energy of the car during collision.

8. When objects collide with each other, energy is transferred between them.
9. Seatbelt is a safety equipment that is used to prevent car passengers from moving forward when the car stops suddenly.
10. When the speed of an object increases, its kinetic energy increases
11. During a car crash, the airbag is inflated with a gas to provide a soft cushion.

Question 04 write scientific term for each of the following

1. A force that you make to move an object away from you — push force
2. One of the fastest and most powerful trucks in the world — shockwave trunk
3. It is a push or pull that is applied to an object cause it to change its position — force
4. The force that pulls objects toward the center of the earth — gravity
5. A change in the position of an object relative to a fixed starting point — Motion
6. The energy that the object gains due to its motion — kinetic energy
7. It is the ability to do work — energy
8. It is a force that causes an object to move a distance — work
9. The form of energy that increases when the speed of an object increases — kinetic energy
10. The stored energy in an object due to its position — potential energy
11. The process in which two objects or more crash into each other and includes an energy. — collision
12. Safety equipment used to prevent car passengers from moving forward when the car stops suddenly. — seatbelt
13. Safety equipment provide a soft cushion, when it inflates automatically with a gas during collision. — airbag
14. A heavy steel ball that swings on a cable and it is used in destruction of buildings parts. — A wrecking ball

Question 05 Give Reason for each of the following

1. The shockwave truck is faster than the normal truck
   Because shockwave truck has three jet engines
2. Engineers use parachutes in shockwave truck
   To help slow down the shockwave truck quickly
3. If you let a pen out of your hand, it falls to the ground
   Because gravity pull it down toward the ground
4. When you stop pedalling during movement of your bicycle, it slows down until it stop
   Due to friction force between the bicycle tires and the road that act in the opposite direction of motion
5. Electric lamp produces different forms of energy
   Because it produces light and thermal energy
6. You switch on an electric lamp
   The electrical energy changes into light energy and thermal energy
7. Airbag deflates after seconds of collision.
   Because it has holes to deflate to let driver get out of the car

Question 06 What happens if ?

1. The shockwave driver opens the parachutes
   The shockwave truck speed slow down quickly
2. You let your toy out of your hand
   It will fall down towards the ground because of gravity force
3. A car runs of fuel on a flat road
   Its speed decreases gradually till it stops
4. A roller coaster moves from up to down
   The stored potential energy changed into kinetic energy



5. You operate a washing machine

Electric energy changes into kinetic energy

6. You switch on an electric lamp

The electrical energy changes into light energy and thermal energy

7. The speed of a car increases. (according to its kinetic energy).

The kinetic energy of the car increases

8. When the mass of a moving body increases, as it moves down wards along a ramp. (According to the kinetic energy)

The kinetic energy will increase

Question 07 cross the odd word

1. Sound energy - light energy - thermal energy - chemical energy

Question 08 Answer the following questions

1. Mention some of the safety equipment in the car?

1 – seatbelt 2- airbag

2. Find the speed of a runner, if you know that he covers 400 meters in 8 seconds.

Speed = $\frac{\text{distance}}{\text{time}}$ Speed = $\frac{400}{8}$ = 50 m/ sec.

3. A train travels from Cairo to Alexandria in a distance of 200 kilometers in 2 hours, Find its speed

Speed = $\frac{\text{distance}}{\text{time}}$ Speed = $\frac{200}{2}$ = 100 km/ hr.

تم بحمد الله

بسم الله الرحمن الرحيم " إِنَّ الَّذِينَ آمَنُوا وَعَمِلُوا الصَّالِحَاتِ إِنَّا لَا نُضِيعُ أَجْرَ مَنْ أَحْسَنَ عَمَلًا " صدق الله العظيم




كيفية طباعة صفحات معينة من ملف معين

مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9

خطوة 1

خطوة 2 اختيار اسم الطابعة بتاعتك

خطوة 3 كتابة الصفحات المراد طباعتها نكتب رقم 4 ثم نكتب الشرطة دي - ثم نكتب 9

خطوة 4 اختيار نوع الورق

خطوة 5 اختيار A4

خطوة 6

المراجعة رقم (2)







Final Revision for first term

Complete the following sentences using the following words:

(1) (spines – cool – hot – warm blood – darker – structural – cold blood – polar)

1-In penguins, blood vessels bring ……………… upward from the feet, but bring ……………… downward to the feet.
2-Starred agama lizards live in extreme ……………… weather.
3- Both of arctic fox and pine tree survive in ……………… habitat.
4-The Barbary fig plant has ……………… that protect it from being eaten by desert animals, and this is considered as ……………… adaptation.
5-Animals that live in forests have fur ………… than that of polar animals.
6-A burrow is an excellent place for fennec fox to stay ………… during day.

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(2) (eyes – tongue – salt – structural – ears – behavioral)

1-The fat layer under the animal's skin to warm it is …………… adaptation.
2-Some animals migrate at certain times of the year. This type of adaptation is called ……………… adaptation.
3-Mangroves trees grow in ……………… water.
4-Chameleons use their ……………… to see the food, while foxes use their ……………… to hear noise of predators.
5-Long sticky ……………… helps panther chameleon to hunt insects.

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(3) (Esophagus – teeth – acacia – respiratory – water – behavioral – fat)

1-Producing a poison by ……………… tree to make a bad tasty leaves belongs to ……………… adaptation.
2-The trunk in acacia tree stores ……… as the hump in camel stores ……….
3-……………… is a tube with muscles that help push food into the stomach.
4-The two lungs are one of the important organs in the …………… system.
5-Crushing the food in your mouth is the function of ………………

(4) (nervous – sounds – structural – taste – echolocation – hair)

1-Sight and ………… are the senses to distinguish between milk and water.

2-The common thing between bats and dolphins is the use of ……………… property through their sense of hearing.

3-The brain is part of your ……………… system.

4-The presence of ……………… on jerboa's feet and toes help it catch sand, and this considered as ……………… adaptation.

5-The Egyptian mongoose makes ……………… to send messages to other mongoose.

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(5) (sight – transparent – eye – rough – light)

1-The organ responsible for the sense of sight is the ……………….

2-Both humans and animals need a source of ……………… to see.

3-Light is reflected off the ……………… surface in different directions.

4-Lenses and glasses are considered ……………… materials.

5-When watching a football game you use your senses of hearing and ………

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(6) (moon – night vision goggles – Light – Owl – sun)

1-The main source of light energy on the earth is the ………………

2-……………… can rotate its head in all directions.

3-The ……………… is not a source of light.

4-……………… energy affects sensory receptors in the eye, causing a vision.

5-Humans use the ……………… to see in the dark.

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(7) (high pitched – smelly – sound – sight – echo – code)

1-The different languages are considered as ……………….

2-Dolphins and humpback whales are sea animals that use ……………… energy in their communication.

3-Fireflies beetles use the sense of ……………… to communicate.

4-The blind person's cane and bats emit ……………… sound that bounces off in the form of ……………….

5-Both of acacia tree and ants use ……………… messages to communicate.

Complete the following sentences:

1-(Forest - Polar) bears blend in with snow through their white fur.

2-Butterflies that have a color like the color of the tree they live on are called this phenomenon (migration – camouflage).

3-One of the adaptations that help the animal protect itself from enemies is (blend in – extinction).

4-Arctic fox has (white – brown) fur in winter, while it has (white – brown) fur in summer.

5-Camouflage in panther chameleon takes place through its brightly colorful (scales – fur).

7-Eyes of chameleon move independently of each other, this is considered as (structural – behavioral) adaptation.

8-Most of sharks can live in (salt - fresh) water only, but bull sharks lives in both water.

9-(Giraffe – deer) is the only animal that may eat acacia leaves.

10- Wide leaves that float above the surface of the water are considered as adaptations of (desert – wetland) plants to get large amount of (sunlight – water).

11- Adaptation to store water is an important trait for plants that live in (wetland – desert) environment.

12- Kapok tree has fluffy (brown – yellow) seeds.

13- (Taproot – Buttress root) is a very long root grows downward to search for water.

14- Leaves of palm tree are tiny like leaves of (pine – acacia) tree.

15-(Taproot – Buttress root) is a large wide root grows up to firmly hold the tree.

16-One of the structural adaptation of water lily plant is that it has (tiny – wide) leaves.

17-The mouth breaks up food mechanically by chewing in which (Teeth only - Teeth and tongue) mix and grind food.

18- The system that digests food to produce energy is (digestive – respiratory) system.
19- Food passes from mouth to stomach through a narrow tube known as (small intestine – esophagus).
20- The diaphragm rises up during the (Inhalation - Exhalation) process.
21- Humans have (lungs- gills) and take in oxygen gas from (air – water).
22- Fish breathe (Oxygen - carbon dioxide) gas which dissolved in water by (lungs- gills).
23- (Breathing - pollution) causes many problems for the lungs.
24- Amphibians are (endangered – extinct) species.
25- (Amphibians – Fish) have two different ways for breathing.
26- You can identify food which is not good through the sense of (hearing – taste).
27- Bats use (light – sound) as a means of communication with each other.
28- The (brain – stomach) is the command center of your body that sends messages to different parts of body for reacting to danger quickly.
29- The nervous system is connected by (nerves – veins) that transmit messages around the body.
30- The skin is an important organ of the (respiratory - nervous) system.
31- Your sensation of hot weather depends on the sensory receptors in the (skin – nose).
32- (Bats – Owls) have the ability to turn the head in all directions.
33- (Veins – Nerves) carries the message from your eyes to your brain when you see something.
34- The sensory receptors convert sensory information to (nerve signals – waves) for sending it to the brain.
35- Jerboa jumps in (straight – zigzag) paths to run quickly from danger.
36- Hopping of the jerboa in zigzag pattern to run away from danger is considered as a (structural – behavioral) adaptation.
37- The long hind legs of jerboa are considered as a (structural – behavioral) adaptation.

38-Closing our eyes quickly when a flash light falls on them suddenly represent (reflex action – camouflage)
39-The time taken for the body to receive information from the environment (reflex action - response time)
40-If an animal eyes glow at night, this means its eyes must contain (lens – mirror like membrane) on the back of their eyes.
41-I saw an eye shining in the dark, this animal could be (bat – cat)
42-Nocturnal animals that are adapted to see at night have (larger – smaller) eyes than the human eyes.
43-Paper and a piece of cloth are considered (smooth – rough) surfaces.
44-(Shiny smooth – Dark rough) materials regularly reflect light better.
45-When light is obscured by an opaque object (echo - Shadow) is formed.
46- (Reflection – Refraction) of light from objects is what lets the (brain – nerves) process and perceiving what our eyes see.
47-Changing the pattern of lighting up in fireflies beetles is an example of (structural – behavioral) adaptation.
48-Reading and writing are common types of communication in (animal – human) world
49-The humpback whales sing a wide range of tones and a series of songs for (hide from enemies – communication).
50-Humpback whales can use (sound – light) energy to communicate.
51-Traffic lights depend on the sense of (hearing – sight) in communication.
52-From the organs that we can use to send or receive the code (heart – eyes).
53-The songs of Humpback whales have (high – low) pitched sounds in summer which is (mating – feeding) season.
54-The (scout ant – nurse ant) is the ant responsible for searching for food.

Choose the correct answer:

1-How do adaptations affect the survival rate of a species?

a)Adaptations increase the survival rate of a species.

b) Adaptations decrease the survival rate of a species.

c)Adaptations change all the organism's structures.

d) Adaptations change all the organism's behaviors

2-Adaptations include changes that ………….. in the environment.

a) reduce chances of survival b) improve species survival

c) reduce life span for individuals d) reduce reproduction process

3-Which would die if it didn't have the right adaptations for survivals in its environment?

a)a rock b) a car c) a tree d) air

4-What happens to organisms that don't have the right adaptations for the conditions in their environment?

a) the population increase b) the organisms die off

c) the population stays the same d) no changes occur

5-If the number of an animal species becomes zero, this mean that this species……………………….

a) becomes endangered b) becomes extinct

c) will survive d) going to be extinct

6-............................. is the covering body of arctic fox.

a) heavy hair b) heavy skin c) thick fur d) thick feathers

7-Fennec fox has ……………. to get rid of excess heat.

a) short ears b) long ears c) long tail d) tongue

8-An animal that has the ability to hide in the desert…………………..

a) caracal b) fennec fox c) lizard d) all of them

9-Fennec fox and caracal have ……. that help them blend in with desert landscape.

a) colorful scales b) sandy colored feathers

c) sandy colored fur d) thick white fur.

10- When panther chameleon stands within leaves of trees, the colors of its scales changes into ……… color.

a) white b) green c) blue d) black

11- The different colors of fur in different types of bears help them to……..

a) respire in their environment. b) adapt their habitat.

c) communicate with other animals. d) look for shade area.

12-Animals that live in a hot environment have ………..…. ears to allow heat to escape for cooling.

a) short b) long c) small d) sharp

13-The color of fur of arctic foxes changed according to season, this is considered as………………..

a)Change of the way of breathing. b) Structural adaptation.

c) Behavioral adaptation. d) Change of the way of feeding.

14- The starred agama lizard keeps cool during a hot sunny day in desert by

a) eating green vegetables b) drinking more water

c) secreting more sweat d) finding a shade area

15- Water lily has wide leaves to absorb a large amount of……………

a) Water b) sunlight c) nutrients d) fats

16-Desert plants are characterized by all the followings except that they…….

a) store water b) have wide leaves

c)have long roots d) have sharp spines

17- If a plant grows in a snowy habitat, so it needs all the following characteristics except ……………. to adapt.

a) short branches b) triangular shapes c) wide leaves d) needle leaves

18- If a plant grows in a rainforest, so it needs ……………… to adapt for getting more sunlight.

a) small roots b) very tall trunk

c) sharp spines d) all previous answers

19- The two trees that can send smelly messages through the wind are……..

a)Kapok and water lily trees. b) Acacia and palm trees.

d) Acacia and kapok trees. d) Mangrove and pine trees.

20-All of the following properties protect acacia leaves from being eaten by animals except that…………………..

a) they are high enough b)they are brightly colored

c)they are guarded by sharp spines d) they produce poison

21-The needed energy to perform different functions of a living organism is obtained from…………………..

a)Breathing only. b) Food processing only.

c) Breathing and running. d) Food processing and breathing.

22-In the mouth teeth and tongue break down the food with the help of……..

a) Saliva b) Pancreatic juices c) Liver juices c) Stomach acids

23-Stomach is a part of the digestive system that…………………

a) chewing food

b) converts solid food into soupy liquid

c) absorbs nutrients from food.

d) delivers food into the esophagus.

24-All the following are similarities between human and fish respiratory system except………………….

a)Both breathe in oxygen. b) Both have lungs.

c) Both breathe out carbon dioxide.

d) In both blood vessels carry oxygen to the body.

25-Fish extracts oxygen out of the water by……………………..

a) skin b) gills c) lungs d) fins

26-From the negative effects of human activities on the human health are…..

a) lung damage and asthma b) heart problems and wounds

c) lung damage and wounds d) asthma and wounds

27-To know if a cup of water is hot or cold we need to use the sense of……..

a) taste b) hearing c) touch d) smell

28-The sharpest sense that dolphins have is the sense of…………….

a) taste b) hearing c) touch d) smell

29- To detect the place of a table in a completely dark room you need to use the sense of………………..

a) taste b) hearing c) touch d) smell

30-Bat is ……………. animal.

a) nocturnal b) morning c) harmful d) wingless

31-Owls have all the following properties to sense distant preys except……..

a) large eyes b) bowl-shaped face

c) head rotates in all directions d) weak sense of hearing

32-All of the following are components of the nervous system except………..

a) spinal cord b) lungs c) brain d) nerves

33-Imagine that you touch a cube of ice with your finger. Where this message is processed and translated?

a) Finger b) Hand c) Brain d) Nerve

34-Which of the following is a source of light?

a) The moon b) The eyes c) Fire d) Mirror

35-When light falls on a dark surface…………………..

a) the surface absorbs the light. b) the light is refracted.

c) light passes through it. d) nothing happens.

36-All the following have structural adaptation in their sense of sight so it is strong except………………….

a) Owl b) Fishing cat c) Bat d) Panther chameleon

37-There is a mirror-like membrane in all of the following except…………..

a) the horse b) the cat c) the human d) the deer

38-Night vision goggles look like ……….. that present in nocturnal animals.

a) Pupils b) Nerves c) mirror-like membrane d) Blood vessels

39-Which of the following allows the light pass through it?

a) moon b) wood c) glass window d) plastic

40-Painted (opaque) surface………………….. the incoming light rays.

a)Absorbs only b) Reflects only

c) Allows to pass d) Absorbs and reflects

41-Raise the thumb up or lower it down a kind of ………..……

a) colors b) codes c) lights d) waves

42- All the following are forms of codes, except………………

a) Faces expressions b) Writing

c) Colors of traffic light d) swimming

43-To communicate through the sense of sight we need……………..

a) hearing music b) making sound

c) moving d) availability of light

44-You could determine how high music sound by…………………..

a) sound style b) sound frequency c) pitch of sound d) sound type

45-……………….. Can communicate by displaying light.

a)All animals b) All plants

c) All plants and animals d) Humans and some animals

46-Animals can communicate with each other through………………

a) sounds and lights b) talking c) reading d) writing

47-Humans can communicate using all the following except…………..

a) sound b) light c) movements d) flying

48-Which of the following communications uses the sense of sight only?

a)Watching TV. b) Flashing light of fireflies.

c) Echolocation in dolphins. d) Using the cell phone.

49-Which of the following communications uses the sense of hearing only?

a) Rescue flare. b) Flashing light of fireflies.

c) Echolocation in bats. d) Using the cell phone.

Write the scientific term:

1-A habitat in which living organisms live. (…………….)

2-Is a change over generations that help organisms to survive and reproduce. (…………….)

3-Change in the structure of the animal's body. (…………….)

4-Change in the behaviors of a group of animals. (…………….)

5-Death of living organisms because they can't adapt to the conditions of its environment. (…………….)

6-The animal that has an insulating layer of fat and thick downy feathers. (…………….)

7-A type of adaptation that helps an animal to hide. (…………….)

8-The animal that panting to lower its body temperature. (…………….)

9-A feature in bull shark, in which the upper surface of its body is darker than its lower surface. (…………….)

10-A tree produces a poison to make the leaves taste very bad to defend itself. (…………….)

11-Liquid that moistens food in mouth to facilitate swallowing.(…………….)

12-The organ in which food is broken down into soupy liquid. (…………….)

13-The organ that absorbs the food nutrients to move into the blood. (…………….)

14-The organ that absorbs water from undigested food. (…………….)

15-The organ through which solid wastes of digestion leave the body.(…...….)

16-A gas presents in air and water and is very important for breathing process. (…………….)

17-The property that depend on the sense of hearing through which dolphins locate their preys under water. (…………….)

18-Animals that becomes active at night. (…………….)

19-The property related to the bouncing of sound waves back when the sound waves hit objects. (…………….)

20-A flying mammal that use echolocation to locate its prey. (…………….)

21-The main control center of the body. (…………….)

22-Part of the nervous system passes through the backbone, and carries messages from body to brain and vice versa. (…………….)

23-Small branches from the spinal cord that distributed throughout all parts of the body. (…………….)

24-A desert rodent with a small body, very large ears and small eyes. (…………….)

25-An animal that can escape from enemies because of the length of its hind leg. (…………….)

26-The time taken by jerboa to react to danger. (…………….)

27-Messages that are so fast that you can't realize it. (…………….)

28-A membrane on the back of eyes of some nocturnal animals that helps them have excellent night vision. (…………….)

29-The visible form of energy. (…………….)

30-Anything that gives off its own light. (…………….)
31-Objects that allow light to pass through. (…………….)
32-Objects that don't form shadows. (…………….)
33-Objects that don't allow light to pass through. (…………….)
34-Objects that form shadows. (…………….)
35-Information that is transformed into another representative form. (…….)
36-Small winged beetles that use their wings to flash. (…………….)
37-A pattern that has a meaning. (…………….)
38-Ants sending smelly message when there is a shortage of food. (…………….)
39-A simple tool used by blind people to walk safely. (…………….)

Put (√) or (X) then correct the wrong:

1-Penguins have special blood vessels in their feet that help them survive in polar region. ( )
2-Penguins have no feathers on their feet. ( )
3-The feet of the penguin freeze in cold winter. ( )
4-The white fur of the arctic fox helps it to blend in with snow. ( )
5-The bodies of fennec foxes, penguins, and caracals are adapted to live in extreme hot climate. ( )
6-The fur that some animals possess to protect them from the cold is a behavioral adaptation. ( )
7-Bull sharks have less competition for finding food in fresh water. ( )
8-Frogs are reptiles while panther chameleon is amphibians. ( )
9-Animals can't eat Barbary fig due to its sharp spines. ( )
10-Pine trees live in desert habitat and have needle leaves. ( )
11-Mangrove tree adapt to resist water waves by having long strong leaves. ( )
12-Kapok tree has hand shaped leaves. ( )
13-Acacia tree grow in Amazon forest. ( )
14-Plants need long roots that extend deep into the soil to survive in the water scarce. ( )

15- Plants have two types of adaptation structural and behavioral. ( )
16- All living organisms need food and oxygen gas to get energy. ( )
17- Food turns from complex to simple during digestion. ( )
18- Esophagus does not absorb food. ( )
19- No digestion takes place in the large intestine. ( )
20- Exhaled air is loaded with oxygen. ( )
21- The respiratory system is responsible for the entry of air into the body. ( )
22- Both salamander and fish can breathe through lungs. ( )
23- Man cannot restore the ecosystem with any way. ( )
24- The nervous system works separately from the five senses. ( )
25- Seeing with our eyes is a way to help us gather information about the environment around us. ( )
26- The ear is the sense organ responsible for seeing objects. ( )
27- Every part of the nervous system can work individually. ( )
28- Foxes have a strong sense of hearing and sight. ( )
29-The skin is the sensory organ that makes you feel the smooth of the cloth. ( )
30- Dolphins have a sharp sense of hearing and sight. ( )
31- The brain sends automatic signal so that we can breathe. ( )
32- Bats can see well in the dark. ( )
33-Your sensation of thunder and lightning depends on your senses of hearing and sight. ( )
34-The time taken by jerboa to react to danger is less than one second. ( )
35- The body can respond to more than one external stimulus at the same time. ( )
36- In a completely dark room, some light entering the eyes. ( )
37- Eyes of nocturnal animals are adapted to see in the total darkness. ( )
38- Some animals can see at night, such as a wild cat. ( )
39- You can see a green ball inside a transparent glass box. ( )
40- Wood is a transparent object that allows light to pass through it. ( )
41- Fishing cat can detect very faint light levels. ( )

42- The Egyptian mongoose makes a group of sounds to communicate with other mongoose. ( )

43- Echolocation is a type of communication between owls. ( )

44- In order for the code to be translated, the brain must identify it. ( )

45- Red and green traffic lights are codes. ( )

46- Fireflies are wingless beetles. ( )

47- It is possible for human to interact with fireflies. ( )

48- Animals can use more than one sense to communicate with each other. ( )

Correct the underlined words:

1-Short ears of arctic fox belong to behavioral adaptation.

2-Panting in dogs and fennec fox belongs to structural adaptation.

3-Caracals have colorful scales to adapt their desert landscape.

4-Camouflage in fennec foxes takes place through their white colored fur.

5-Thick fur helps polar bear to stay cool in cold environment.

6-White fur helps bears to blend in with the trees while hunting.

7-Fishing cat is similar to fennec fox in having sandy-colored fur.

8-Bull sharks have less competition for finding food in salt water.

9-Both of panther chameleon and kapok tree survive in polar habitat.

10- Both of fennec fox and palm tree survive in hot forest habitat.

11-In bull shark the lower surface of its body is darker than its upper surface.

12-Lizards are from mammals that are ancient type of animals.

13- The body of some types of lizard is covered with colored fur to blend in with colored rocks.

14- Kapok tree sends delicious messages to attract owls.

15- Adaptation to store water is an important character for plants that live in rainforest habitat.

16- When running and making an effort, the number of breathing times decreases.

17-The wall of small intestine has tiny nerves to absorb the nutrients.

18- Pancreas and liver secrete juices that flow into large intestine to break down food into nutrients.
19- Amphibians live in dry environment.
20- When you determine a sweet or bitter taste, you have used your eyes.
21- Bats use their sense of smell to hunt and avoid obstacles.
22- The Egyptian jerboa is one of desert reptiles.
23- Humans use their digestive system to sense and process information.
24- The brain responds to information sent by the sense of sight slower than information sent by the sense of hearing.
25- Nerves of nose and heart are connected directly to the brain.
26- Wood and carton are considered transparent materials.
27- Light travels in zigzag lines in the form of light waves.
28- Things can't be seen through transparent objects.
29- Scout ants sending smelly message if there is a danger nearby to protect the colony.

Compare between inhalation and exhalation using these words:

(Carbon dioxide-downward-Relax-Increase-Contract-Oxygen-upward)

Point of comparison	Inhalation	Exhalation
Diaphragm movement	……………., and move …………….	……………. , and move …………….
Size of chest cavity	……………..	……………..
The air rich in	……………. gas.	……………. gas.

Choose from column (B) what suits it in column (A):

1)

Column (A)	Column (B)
1- A common organ in the digestive and respiratory system.	a) Carbon dioxide
2- The process of pushing air in and out of the body.	b) Respiration
3- Branches inside the lung that resemble tree branches	c) Pharynx (throat)
4- A gas produced by respiration.	d) Diaphragm
5- A muscle that has an important role in the breathing process.	e) Bronchioles

1	2	3	4	5
………..	………..	………..	………..	………..

2)

Column (A)	Column (B)
1-Owl	a) Eyes glow to see at night.
2-Fishing cat	b) Use echo to locate preys under water.
3-Dolphin	c) The prey of the snake and hops to escape in zigzag path.
4-Bat	d) The face shape collects and amplify different sounds.
5-Jerboa	e) Sleep upside down and depend on echo of the sound to locate preys.

1	2	3	4	5
………..	………..	………..	………..	………..

3)

Column (A)	Column (B)
1-The visible form of energy that is transmitted in the form of waves.	a) mirror- like membrane
2-A structural adaptation in the eye that provides some animals with better vision at night.	b) Light
3-When an object falls from your hands.	c) Smell
4-When a foreign object is brought into your eyes	d) Using the sense of sight
5-Ants use it to sense and communicate	e) The reflex action occurs.

1	2	3	4	5
………..	………..	………..	………..	………..

4)

Column (A)	Column (B)
1-A way to communicate between some animals like Fireflies beetles.	a) Brain
2-Carry messages to the brain via the spinal cord.	b) Spinal cord
3-It is similar in its processing of information to a computer.	c) Nerves
4-Animals live in water and communicate by songs.	d) Flash light
5-Responsible for the transmission of commands through nerves to the muscles to contract.	e) Humpback whales

1	2	3	4	5
………..	………..	………..	………..	………..

Give reason for the

1-Adaptation is an important trait of living organisms.

- ……………………………………………………………………...

2-Some animals have the ability to make camouflage adaptation.

- ……………………………………………………………………...

3- The penguin has an insulating layer of fat and thick downy feathers.

- ……………………………………………………………………...

4- The polar bears (or arctic foxes) have thick fur.

- ……………………………………………………………………...

5-Forest bears have dark or brown fur.

- ……………………………………………………………………...

6-Polar bears (or arctic foxes) have white fur.

- ……………………………………………………………………...

7-Arctic fox has short ears and legs.

- ……………………………………………………………………...

8-Fennec fox has extra-large ears. (Fennec fox pants like dogs)

- ……………………………………………………………………...

9-Panther chameleon is covered with colored scales.

- ……………………………………………………………………...

10- Chameleons can move each of their eyes in a different direction.

- ……………………………………………………………………...

11- Panther chameleon has V-shaped feet and tail like a hand.

- ……………………………………………………………………...

12- Bull shark has sharp teeth.

- ……………………………………………………………………...

13- Bull sharks have less competition for finding food in fresh water.

- ……………………………………………………………………...

14- Desert lizard looks for shade during hot sunny days.

- ……………………………………………………………………...

15- The leaves of plants that float above the water surface are so wide.

➢ ……………………………………………………………………...

16- The shape of pine tree leaves is like a needle.

➢ ……………………………………………………………………...

17- Barbary fig has sharp spines.

➢ ……………………………………………………………………...

18- Kapok tree has large wide roots that grow up on its trunk.

➢ ……………………………………………………………………...

19- Kapok tree has hand-shaped leaves.

➢ ……………………………………………………………………...

20- Pine tree has a triangular shape and short branches.

➢ ……………………………………………………………………...

21- Saliva is very important in your mouth.

➢ ……………………………………………………………………...

22- The small intestine has tiny blood vessels.

➢ ……………………………………………………………………...

23- The inhaled air is different from the exhaled air.

➢ ……………………………………………………………………...

24- Gills are unique structural adaptation in fish.

➢ ……………………………………………………………………...

25- Amphibians are endangered species.

➢ ……………………………………………………………………...

26- Dogs are used in guarding.

➢ ……………………………………………………………………...

27-Dolphin can hear all kind of sounds.

➢ ……………………………………………………………………...

28-A dolphin can locate living organisms and things under the surface of the water.

➢ ……………………………………………………………………...

29- Bats cannot see in the dark, but they hunt their prey at night.

➢ ……………………………………………………………………...

30- Owls can hunt during night.

➢ ……………………………………………………………………...

31- The jumping jerboa can jump for long distances.

➢ ……………………………………………………………………...

32- Feet and toes of jerboa have hairs.

➢ ……………………………………………………………………...

33- Some animals have a structural adaptation in their eyes.

➢ ……………………………………………………………………...

34- Some animals like cats have the ability to see in the dark.

➢ ……………………………………………………………………...

35- Moon is not a source of light.

➢ ……………………………………………………………………...

36- You can see an object placed behind a glass cup.

➢ ……………………………………………………………………...

37- Mirror reflects light better than painted surface.

➢ ……………………………………………………………………...

38- You can't see an object placed behind a wood door.

➢ ……………………………………………………………………...

39- Fireflies produce a chemical reaction inside their bodies.

➢ ……………………………………………………………………...

40- Fireflies use flashing light to communicate.

➢ ……………………………………………………………………...

41- Humpback whales sing different songs.

➢ ……………………………………………………………………...

42- The songs of Humpback whales have high pitched sounds in winter.

➢ ……………………………………………………………………...

43- The hearing sense is very important for bats.

➢ ……………………………………………………………………...

What happens if……?

1- Animals can't adapt their environment.
   ➢ ……………………………………………………………………...
2- The polar bears have thin fur instead of thick fur.
   ➢ ……………………………………………………………………...
3- Forest bears are coated with white fur.
   ➢ ……………………………………………………………………...
4- Arctic fox has brown fur in winter, while it has white fur in summer.
   ➢ ……………………………………………………………………...
5- A plant is taken from its original habitat and placed in another different environment.
   ➢ ……………………………………………………………………...
6- The small intestine is removed from the human body.
   ➢ ……………………………………………………………………...
7- Diaphragm moves downward during inhalation.
   ➢ ……………………………………………………………………...
8- Diaphragm moves upward during exhalation.
   ➢ ……………………………………………………………………...
9- Owl can't rotate its head in all direction.
   ➢ ……………………………………………………………………...
10- The structure of fishing cat's eyes is the same like human.
   ➢ ……………………………………………………………………...
11- Light falls on smooth and shiny surface.
   ➢ ……………………………………………………………………...
12- Light falls on rough surface.
   ➢ ……………………………………………………………………...
13- A firefly wants to attract mates.
   ➢ ……………………………………………………………………...
14- The amount of food in ants colony decreases.
   ➢ ……………………………………………………………………...

Answer the following questions:

1- Jerboa has long and strong hind legs that help him to jump quickly and escape when danger. Determine the type of adaptation.

Solution: …………………………………………………………………….

………………………………………………………………………………...

****

2- The husky dogs live in a cold environment, while another type of dogs live in a hot environment. In your opinion, which one has thick fur? And why?

Solution:

- The ……………….. dogs that live in a ………………… environment.
- The thick fur keeps their body …………………..

****

3- Which figure shows the correct structure of blood vessels in the feet of penguins? Explain how do this adaptation help penguins survive in cold climate ?

Figure ………………..

Because ………………..

…………………………..

…………………………..

a)

b)

****

4-Panther chameleon puffs up its body with air for defense. What is the type of adaptation?

……………………………..

****

5-Mohamed drives his bike and while that he hears a car behind him, he turns away so as not to hit it. Which system inside the body received a signal made Mohamed realize that?

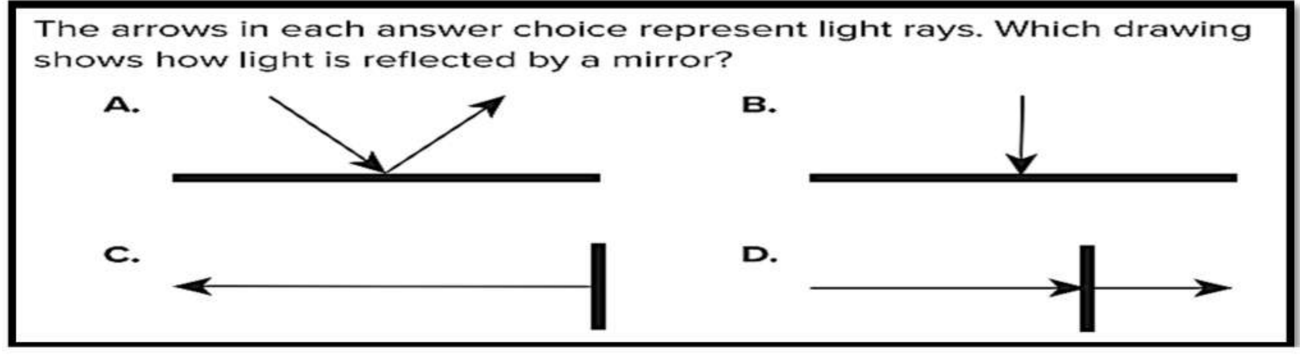
…………………..…………………..…………………..

6-Adam hurt his toe when he climbed. How did he know that he had hurt his toe?

a) The nerves in his hurt toe sent a signal through his body to the brain.
b) The blood in his hurt toe sent a signal through his body to the brain.
c) Adam toes became very cold.
d) Adam toes became smaller.

****

7- choose the correct figure:


The arrows in each answer choice represent light rays. Which drawing shows how light is reflected by a mirror?

A.

B.

C.

D.

****

8- To see what was inside a box without having to open the box. What material should be used? (wood – mirror – transparent plastic – carton)

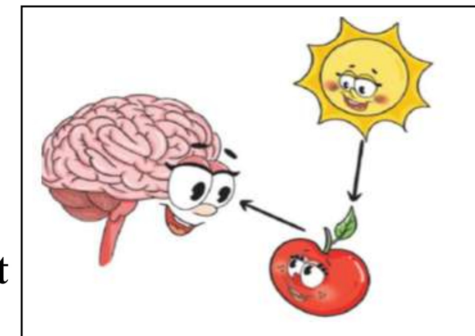
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9- To prevent the light from entering your room, suggest some materials that you can use to cover the window.

Solution: …………………..………………..………………..

****

10- look to the figure then complete:



The light falls on the …………… then it is reflected on the eyes , so the eyes transmit the message to …………… then he interprets it and translates it, so we see the apple.

11- look to the figure then complete:

the surface represents the reflection of light rays from a wooden spoon is ……………

Because it is a …………… surface.

****

12- look to the figure then complete:

Object (A) is (transparent – opaque).

Object (B) is (transparent – opaque).

****

13-look to the figure then complete:

the figure represents a transparent object is …………………………

the figure represents an opaque object is …………………………

****

14- Who I am: a body that appears light at night, but isn't considered as a source of light?

………………………………………….

****

15- What is a common mean of communication between some animals and human?

➢ **……………………………………………………………………….**

Cross out the odd word:

1- Penguin – polar bear – arctic fox – fennec fox.

2- Cactus plant – palm tree – Barbary fig – pine tree.

3- Acacia tree – polar bear – pine tree – penguin.

4- Mouth – lungs – stomach – small intestine.

5- Nose – trachea – anus – air sacs – lungs.

6- Toads – panther chameleon – frogs – salamanders.

7- Panther chameleon – starred agama lizard – bull shark – arctic fox.

8- Smell – taste – eye – hearing.

9- Eye – Nose – taste – skin.

10- Brain – spinal cord – nerves – stomach.

11- Sun – moon – flashlight – fire.

12- Moon – mirror – eye – candle.

13- Fishing cat – owl – dolphins – tarsier.

14- Wood – paper – metals – air.

15- Wood – glass – air – water.

16- Bats – fireflies – dolphins – blind person's cane.

Best wishes
Dr/ Zeinab Salah

Final Revision for first term

Complete the following sentences using the following words:

(1) (spines – cool – hot – warm blood – darker – structural – cold blood – polar)

1-In penguins, blood vessels bring cold blood upward from the feet, but bring warm blood downward to the feet.

2-Starred agama lizards live in extreme hot weather.

3- Both of arctic fox and pine tree survive in polar habitat.

4-The Barbary fig plant has spines that protect it from being eaten by desert animals, and this is considered as structural adaptation.

5-Animals that live in forests have fur darker than that of polar animals.

6-A burrow is an excellent place for fennec fox to stay cool during day.

----

(2) (eyes – tongue – salt – structural – ears – behavioral)

1-The fat layer under the animal's skin to warm it is structural adaptation.

2-Some animals migrate at certain times of the year. This type of adaptation is called behavioral adaptation.

3-Mangroves trees grow in salt water.

4-Chameleons use their eyes to see the food, while foxes use their ears to hear noise of predators.

5-Long sticky tongue helps panther chameleon to hunt insects.

----

(3) (Esophagus – teeth – acacia – respiratory – water – behavioral – fat)

1-Producing a poison by acacia tree to make a bad tasty leaves belongs to behavioral adaptation.

2-The trunk in acacia tree stores water as the hump in camel stores fat.

3-Esophagus is a tube with muscles that help push food into the stomach.

4-The two lungs are one of the important organs in the respiratory system.

5-Crushing the food in your mouth is the function of teeth.

(4) (nervous – sounds – structural – taste – echolocation – hair)

1-Sight and taste are the senses to distinguish between milk and water.

2-The common thing between bats and dolphins is the use of echolocation property through their sense of hearing.

3-The brain is part of your nervous system.

4-The presence of hair on jerboa's feet and toes help it catch sand, and this considered as structural adaptation.

5-The Egyptian mongoose makes sounds to send messages to other mongoose.

---

(5) (sight – transparent – eye – rough – light)

1-The organ responsible for the sense of sight is the eye.

2-Both humans and animals need a source of light to see.

3-Light is reflected off the rough surface in different directions.

4-Lenses and glasses are considered transparent materials.

5-When watching a football game you use your senses of hearing and sight.

---

(6) (moon – night vision goggles – Light – Owl – sun)

1-The main source of light energy on the earth is the sun.

2-Owl can rotate its head in all directions.

3-The moon is not a source of light.

4-Light energy affects sensory receptors in the eye, causing a vision.

5-Humans use the night vision goggles to see in the dark.

---

(7) (high pitched – smelly – sound – sight – echo – code)

1-The different languages are considered as code.

2-Dolphins and humpback whales are sea animals that use sound energy in their communication.

3-Fireflies beetles use the sense of sight to communicate.

4-The blind person's cane and bats emit high pitched sound that bounces off in the form of echo.

5-Both of acacia tree and ants use smelly messages to communicate.

Complete the following sentences:

1-(Forest - Polar) bears blend in with snow through their white fur.

2-Butterflies that have a color like the color of the tree they live on are called this phenomenon (migration – camouflage).

3-One of the adaptations that help the animal protect itself from enemies is (blend in – extinction).

4-Arctic fox has (white – brown) fur in winter, while it has (white – brown) fur in summer.

5-Camouflage in panther chameleon takes place through its brightly colorful (scales – fur).

7-Eyes of chameleon move independently of each other, this is considered as (structural – behavioral) adaptation.

8-Most of sharks can live in (salt - fresh) water only, but bull sharks lives in both water.

9-(Giraffe – deer) is the only animal that may eat acacia leaves.

10- Wide leaves that float above the surface of the water are considered as adaptations of (desert – wetland) plants to get large amount of (sunlight – water).

11- Adaptation to store water is an important trait for plants that live in (wetland – desert) environment.

12- Kapok tree has fluffy (brown – yellow) seeds.

13- (Taproot – Buttress root) is a very long root grows downward to search for water.

14- Leaves of palm tree are tiny like leaves of (pine – acacia) tree.

15-(Taproot – Buttress root) is a large wide root grows up to firmly hold the tree.

16-One of the structural adaptation of water lily plant is that it has (tiny – wide) leaves.

17-The mouth breaks up food mechanically by chewing in which (Teeth only - Teeth and tongue) mix and grind food.

18- The system that digests food to produce energy is (digestive – respiratory) system.

19- Food passes from mouth to stomach through a narrow tube known as (small intestine – esophagus).

20- The diaphragm rises up during the (Inhalation - Exhalation) process.

21- Humans have (lungs- gills) and take in oxygen gas from (air – water).

22- Fish breathe (Oxygen - carbon dioxide) gas which dissolved in water by (lungs- gills).

23- (Breathing - pollution) causes many problems for the lungs.

24- Amphibians are (endangered – extinct) species.

25- (Amphibians – Fish) have two different ways for breathing.

26- You can identify food which is not good through the sense of (hearing – taste).

27- Bats use (light – sound) as a means of communication with each other.

28- The (brain – stomach) is the command center of your body that sends messages to different parts of body for reacting to danger quickly.

29- The nervous system is connected by (nerves – veins) that transmit messages around the body.

30- The skin is an important organ of the (respiratory - nervous) system.

31- Your sensation of hot weather depends on the sensory receptors in the (skin – nose).

32- (Bats – Owls) have the ability to turn the head in all directions.

33- (Veins – Nerves) carries the message from your eyes to your brain when you see something.

34- The sensory receptors convert sensory information to (nerve signals – waves) for sending it to the brain.

35- Jerboa jumps in (straight – zigzag) paths to run quickly from danger.

36- Hopping of the jerboa in zigzag pattern to run away from danger is considered as a (structural – behavioral) adaptation.

37- The long hind legs of jerboa are considered as a (structural – behavioral) adaptation.

38-Closing our eyes quickly when a flash light falls on them suddenly represent (reflex action – camouflage)

39-The time taken for the body to receive information from the environment (reflex action - response time)

40-If an animal eyes glow at night, this means its eyes must contain (lens – mirror like membrane) on the back of their eyes.

41-I saw an eye shining in the dark, this animal could be (bat – cat)

42-Nocturnal animals that are adapted to see at night have (larger – smaller) eyes than the human eyes.

43-Paper and a piece of cloth are considered (smooth – rough) surfaces.

44-(Shiny smooth – Dark rough) materials regularly reflect light better.

45-When light is obscured by an opaque object (echo - Shadow) is formed.

46- (Reflection – Refraction) of light from objects is what lets the (brain – nerves) process and perceiving what our eyes see.

47-Changing the pattern of lighting up in fireflies beetles is an example of (structural – behavioral) adaptation.

48-Reading and writing are common types of communication in (animal – human) world

49-The humpback whales sing a wide range of tones and a series of songs for (hide from enemies – communication).

50-Humpback whales can use (sound – light) energy to communicate.

51-Traffic lights depend on the sense of (hearing – sight) in communication.

52-From the organs that we can use to send or receive the code (heart – eyes).

53-The songs of Humpback whales have (high – low) pitched sounds in summer which is (mating – feeding) season.

54-The (scout ant – nurse ant) is the ant responsible for searching for food.

Choose the correct answer:

1-How do adaptations affect the survival rate of a species?

a)Adaptations increase the survival rate of a species.

b) Adaptations decrease the survival rate of a species.

c)Adaptations change all the organism's structures.

d) Adaptations change all the organism's behaviors

2-Adaptations include changes that ………….. in the environment.

a) reduce chances of survival b) improve species survival

c) reduce life span for individuals d) reduce reproduction process

3-Which would die if it didn't have the right adaptations for survivals in its environment?

a)a rock b) a car c) a tree d) air

4-What happens to organisms that don't have the right adaptations for the conditions in their environment?

a) the population increase b) the organisms die off

c) the population stays the same d) no changes occur

5-If the number of an animal species becomes zero, this mean that this species………………………..

a) becomes endangered b) becomes extinct

c) will survive d) going to be extinct

6-.............................. is the covering body of arctic fox.

a) heavy hair b) heavy skin c) thick fur d) thick feathers

7-Fennec fox has …………….. to get rid of excess heat.

a) short ears b) long ears c) long tail d) tongue

8-An animal that has the ability to hide in the desert…………………..

a) caracal b) fennec fox c) lizard d) all of them

9-Fennec fox and caracal have ……. that help them blend in with desert landscape.

a) colorful scales b) sandy colored feathers

c) sandy colored fur d) thick white fur.

10- When panther chameleon stands within leaves of trees, the colors of its scales changes into ……… color.

a) white b) green c) blue d) black

11- The different colors of fur in different types of bears help them to……..

a) respire in their environment. b) adapt their habitat.

c) communicate with other animals. d) look for shade area.

12- Animals that live in a hot environment have ………….. ears to allow heat to escape for cooling.

a) short b) long c) small d) sharp

13- The color of fur of arctic foxes changed according to season, this is considered as………………..

a)Change of the way of breathing. b) Structural adaptation.

c) Behavioral adaptation. d) Change of the way of feeding.

14- The starred agama lizard keeps cool during a hot sunny day in desert by

a) eating green vegetables b) drinking more water

c) secreting more sweat d) finding a shade area

15- Water lily has wide leaves to absorb a large amount of…………….

a) Water b) sunlight c) nutrients d) fats

16- Desert plants are characterized by all the followings except that they…….

a) store water b) have wide leaves

c)have long roots d) have sharp spines

17- If a plant grows in a snowy habitat, so it needs all the following characteristics except …………..… to adapt.

a) short branches b) triangular shapes c) wide leaves d) needle leaves

18- If a plant grows in a rainforest, so it needs …………..…. to adapt for getting more sunlight.

a) small roots b) very tall trunk

c) sharp spines d) all previous answers

19- The two trees that can send smelly messages through the wind are……..

a)Kapok and water lily trees. b) Acacia and palm trees.

d) Acacia and kapok trees. d) Mangrove and pine trees.

20-All of the following properties protect acacia leaves from being eaten by animals except that…………………..

a) they are high enough **b)they are brightly colored**

c)they are guarded by sharp spines **d) they produce poison**

21-The needed energy to perform different functions of a living organism is obtained from…………………..

a)Breathing only. **b) Food processing only.**

c) Breathing and running. **d) Food processing and breathing.**

22-In the mouth teeth and tongue break down the food with the help of……..

a) Saliva **b) Pancreatic juices** **c) Liver juices** **c) Stomach acids**

23-Stomach is a part of the digestive system that…………………

a) chewing food

b) converts solid food into soupy liquid

c) absorbs nutrients from food.

d) delivers food into the esophagus.

24-All the following are similarities between human and fish respiratory system except………………….

a)Both breathe in oxygen. **b) Both have lungs.**

c) Both breathe out carbon dioxide.

d) In both blood vessels carry oxygen to the body.

25-Fish extracts oxygen out of the water by……………………..

a) skin **b) gills** **c) lungs** **d) fins**

26-From the negative effects of human activities on the human health are…..

a) lung damage and asthma **b) heart problems and wounds**

c) lung damage and wounds **d) asthma and wounds**

27-To know if a cup of water is hot or cold we need to use the sense of……..

a) taste **b) hearing** **c) touch** **d) smell**

28-The sharpest sense that dolphins have is the sense of…………….

a) taste **b) hearing** **c) touch** **d) smell**

29- To detect the place of a table in a completely dark room you need to use the sense of………………..

a) taste **b) hearing** **c) touch** **d) smell**

30-Bat is ……………. animal.

a) <u>nocturnal</u>   b) morning   c) harmful   d) wingless

31-Owls have all the following properties to sense distant preys except……..

a) large eyes   b) bowl-shaped face

c) head rotates in all directions   d) <u>weak sense of hearing</u>

32-All of the following are components of the nervous system except………..

a) spinal cord   b) <u>lungs</u>   c) brain   d) nerves

33-Imagine that you touch a cube of ice with your finger. Where this message is processed and translated?

a) Finger   b) Hand   c) <u>Brain</u>   d) Nerve

34-Which of the following is a source of light?

a) The moon   b) The eyes   c) <u>Fire</u>   d) Mirror

35-When light falls on a dark surface…………………..

a) <u>the surface absorbs the light</u>.   b) the light is refracted.

c) light passes through it.   d) nothing happens.

36-All the following have structural adaptation in their sense of sight so it is strong except…………………..

a) Owl   b) Fishing cat   c) <u>Bat</u>   d) Panther chameleon

37-There is a mirror-like membrane in all of the following except…………..

a) the horse   b) the cat   c) <u>the human</u>   d) the deer

38-Night vision goggles look like ……….. that present in nocturnal animals.

a) Pupils   b) Nerves   c) <u>mirror-like membrane</u>   d) Blood vessels

39-Which of the following allows the light pass through it?

a) moon   b) wood   c) <u>glass window</u>   d) plastic

40-Painted (opaque) surface………………….. the incoming light rays.

a)Absorbs only   b) Reflects only

c) Allows to pass   d) <u>Absorbs and reflects</u>

41-Raise the thumb up or lower it down a kind of ………………

a) colors   b) <u>codes</u>   c) lights   d) waves

42- All the following are forms of codes, except………………

a) Faces expressions   b) Writing

c) Colors of traffic light   d) <u>swimming</u>

43-To communicate through the sense of sight we need……………..

a) hearing music b) making sound

c) moving d) availability of light

44-You could determine how high music sound by…………………..

a) sound style b) sound frequency c) pitch of sound d) sound type

45-……………….. Can communicate by displaying light.

a)All animals b) All plants

c) All plants and animals d) Humans and some animals

46-Animals can communicate with each other through……………….

a) sounds and lights b) talking c) reading d) writing

47-Humans can communicate using all the following except…………..

a) sound b) light c) movements d) flying

48-Which of the following communications uses the sense of sight only?

a)Watching TV. b) Flashing light of fireflies.

c) Echolocation in dolphins. d) Using the cell phone.

49-Which of the following communications uses the sense of hearing only?

a) Rescue flare. b) Flashing light of fireflies.

c) Echolocation in bats. d) Using the cell phone.

Write the scientific term:

1-A habitat in which living organisms live. (ecosystem)

2-Is a change over generations that help organisms to survive and reproduce. (adaptation)

3-Change in the structure of the animal's body. (structural adaptation)

4-Change in the behaviors of a group of animals. (behavioral adaptation)

5-Death of living organisms because they can't adapt to the conditions of its environment. (extinction)

6-The animal that has an insulating layer of fat and thick downy feathers. (Penguin)

7-A type of adaptation that helps an animal to hide. (Camouflage)

8-The animal that panting to lower its body temperature. (Fennec fox)

9-A feature in bull shark, in which the upper surface of its body is darker than its lower surface. (counter-shading)

10- A tree produces a poison to make the leaves taste very bad to defend itself. (acacia tree)

11- Liquid that moistens food in mouth to facilitate swallowing. (saliva)

12- The organ in which food is broken down into soupy liquid. (the stomach)

13- The organ that absorbs the food nutrients to move into the blood. (small intestine)

14- The organ that absorbs water from undigested food. (large intestine)

15- The organ through which solid wastes of digestion leave the body. (anus)

16- A gas presents in air and water and is very important for breathing process. (oxygen)

17- The property that depend on the sense of hearing through which dolphins locate their preys under water. (echolocation)

18- Animals that becomes active at night. (nocturnal animals)

19- The property related to the bouncing of sound waves back when the sound waves hit objects. (echolocation)

20- A flying mammal that use echolocation to locate its prey. (bat)

21- The main control center of the body. (the brain)

22- Part of the nervous system passes through the backbone, and carries messages from body to brain and vice versa. (spinal cord)

23- Small branches from the spinal cord that distributed throughout all parts of the body. (nerves)

24- A desert rodent with a small body, very large ears and small eyes. (jumping jerboa)

25- An animal that can escape from enemies because of the length of its hind leg. (jumping jerboa)

26- The time taken by jerboa to react to danger. (reaction time)

27- Messages that are so fast that you can’t realize it. (reflex actions)

28- A membrane on the back of eyes of some nocturnal animals that helps them have excellent night vision. (mirror like membrane)

29- The visible form of energy. (light energy)

30-Anything that gives off its own light. (light source)
31-Objects that allow light to pass through. (transparent objects)
32-Objects that don't form shadows. (transparent objects)
33-Objects that don't allow light to pass through. (opaque objects)
34-Objects that form shadows. (opaque objects)
35-Information that is transformed into another representative form. (code)
36-Small winged beetles that use their wings to flash. (Fireflies beetles)
37-A pattern that has a meaning. (code)
38-Ants sending smelly message when there is a shortage of food. (Nurse ants)
39-A simple tool used by blind people to walk safely. (blind people cane)

Put (√) or (X) then correct the wrong:

1-Penguins have special blood vessels in their feet that help them survive in polar region. (√)
2-Penguins have no feathers on their feet. (√)
3-The feet of the penguin freeze in cold winter. (X)
4-The white fur of the arctic fox helps it to blend in with snow. (√)
5-The bodies of fennec foxes, penguins, and caracals are adapted to live in extreme hot climate. (X)
6-The fur that some animals possess to protect them from the cold is a behavioral adaptation. (X)
7-Bull sharks have less competition for finding food in fresh water. (√)
8-Frogs are reptiles while panther chameleon is amphibians. (X)
9-Animals can't eat Barbary fig due to its sharp spines. (√)
10-Pine trees live in desert habitat and have needle leaves. (√)
11-Mangrove tree adapt to resist water waves by having long strong leaves. (X)
12-Kapok tree has hand shaped leaves. (√)
13-Acacia tree grow in Amazon forest. (X)
14-Plants need long roots that extend deep into the soil to survive in the water scarce. (√)

15- Plants have two types of adaptation structural and behavioral. (√)
16- All living organisms need food and oxygen gas to get energy. (√)
17- Food turns from complex to simple during digestion. (√)
18- Esophagus does not absorb food. (√)
19- No digestion takes place in the large intestine. (√)
20- Exhaled air is loaded with oxygen. (X)
21- The respiratory system is responsible for the entry of air into the body. (√)
22- Both salamander and fish can breathe through lungs. (X)
23- Man cannot restore the ecosystem with any way. (X)
24- The nervous system works separately from the five senses. (X)
25- Seeing with our eyes is a way to help us gather information about the environment around us. (√)
26- The ear is the sense organ responsible for seeing objects. (X)
27- Every part of the nervous system can work individually. (X)
28- Foxes have a strong sense of hearing and sight. (√)
29-The skin is the sensory organ that makes you feel the smooth of the cloth. (√)
30- Dolphins have a sharp sense of hearing and sight. (X)
31- The brain sends automatic signal so that we can breathe. (√)
32- Bats can see well in the dark. (X)
33-Your sensation of thunder and lightning depends on your senses of hearing and sight. (√)
34-The time taken by jerboa to react to danger is less than one second. (√)
35- The body can respond to more than one external stimulus at the same time. (√)
36- In a completely dark room, some light entering the eyes. (X)
37- Eyes of nocturnal animals are adapted to see in the total darkness. (X)
38- Some animals can see at night, such as a wild cat. (√)
39- You can see a green ball inside a transparent glass box. (√)
40- Wood is a transparent object that allows light to pass through it. (X)
41- Fishing cat can detect very faint light levels. (√)

42- The Egyptian mongoose makes a group of sounds to communicate with other mongoose. (√)

43- Echolocation is a type of communication between owls. (X)

44- In order for the code to be translated, the brain must identify it. (√)

45- Red and green traffic lights are codes. (√)

46- Fireflies are wingless beetles. (X)

47- It is possible for human to interact with fireflies. (√)

48- Animals can use more than one sense to communicate with each other. (√)

Correct the underlined words:

1-Short ears of arctic fox belong to behavioral adaptation. (structural)

2-Panting in dogs and fennec fox belongs to structural adaptation. (behavioral)

3-Caracals have colorful scales to adapt their desert landscape. (tan-colored fur)

4-Camouflage in fennec foxes takes place through their white colored fur. (sandy)

5-Thick fur helps polar bear to stay cool in cold environment. (warm)

6-White fur helps bears to blend in with the trees while hunting. (Dark or brown fur)

7-Fishing cat is similar to fennec fox in having sandy-colored fur. (Caracal)

8-Bull sharks have less competition for finding food in salt water. (fresh)

9-Both of panther chameleon and kapok tree survive in polar habitat. (rainforest)

10- Both of fennec fox and palm tree survive in hot forest habitat. (desert)

11-In bull shark the lower surface of its body is darker than its upper surface. (lighter)

12-Lizards are from mammals that are ancient type of animals. (reptiles)

13- The body of some types of lizard is covered with colored fur to blend in with colored rocks. (scales)

14- Kapok tree sends delicious messages to attract owls. (bats)

15- Adaptation to store water is an important character for plants that live in rainforest habitat. (desert)

16- When running and making an effort, the number of breathing times decreases. (increases)

17- The wall of small intestine has tiny nerves to absorb the nutrients. (blood vessels)

18- Pancreas and liver secrete juices that flow into large intestine to break down food into nutrients. (small intestine)

19- Amphibians live in dry environment. (wet)

20- When you determine a sweet or bitter taste, you have used your eyes. (tongue)

21- Bats use their sense of smell to hunt and avoid obstacles. (hearing)

22- The Egyptian jerboa is one of desert reptiles. (rodents)

23- Humans use their digestive system to sense and process information. (nervous)

24- The brain responds to information sent by the sense of sight slower than information sent by the sense of hearing. (faster)

25- Nerves of nose and heart are connected directly to the brain. (eyes)

26- Wood and carton are considered transparent materials. (opaque)

27- Light travels in zigzag lines in the form of light waves. (straight)

28- Things can't be seen through transparent objects. (opaque)

29- Scout ants sending smelly message if there is a danger nearby to protect the colony. (Soldier)

Compare between inhalation and exhalation using these words:

(Carbon dioxide-downward-Relax-Increase-Contract-Oxygen-upward)

Point of comparison	Inhalation	Exhalation
Diaphragm movement	Contract, and move downward.	Relax , and move upward.
Size of chest cavity	Increase.	Decrease.
The air rich in	Oxygen gas.	Carbon dioxide gas.

Choose from column (B) what suits it in column (A):

1)

Column (A)	Column (B)
1- A common organ in the digestive and respiratory system.	a) Carbon dioxide
2- The process of pushing air in and out of the body.	b) Respiration
3- Branches inside the lung that resemble tree branches	c) Pharynx (throat)
4- A gas produced by respiration.	d) Diaphragm
5- A muscle that has an important role in the breathing process.	e) Bronchioles

1	2	3	4	5
c	b	e	a	d

2)

Column (A)	Column (B)
1-Owl	a) Eyes glow to see at night.
2-Fishing cat	b) Use echo to locate preys under water.
3-Dolphin	c) The prey of the snake and hops to escape in zigzag path.
4-Bat	d) The face shape collects and amplify different sounds.
5-Jerboa	e) Sleep upside down and depend on echo of the sound to locate preys.

1	2	3	4	5
d	a	b	e	c

3)

Column (A)	Column (B)
1-The visible form of energy that is transmitted in the form of waves.	a) mirror- like membrane
2-A structural adaptation in the eye that provides some animals with better vision at night.	b) Light
3-When an object falls from your hands.	c) Smell
4-When a foreign object is brought into your eyes	d) Using the sense of sight
5-Ants use it to sense and communicate	e) The reflex action occurs.

1	2	3	4	5
b	a	d	e	c

4)

Column (A)	Column (B)
1-A way to communicate between some animals like Fireflies beetles.	a) Brain
2-Carry messages to the brain via the spinal cord.	b) Spinal cord
3-It is similar in its processing of information to a computer.	c) Nerves
4-Animals live in water and communicate by songs.	d) Flash light
5-Responsible for the transmission of commands through nerves to the muscles to contract.	e) Humpback whales

1	2	3	4	5
d	c	a	e	b

Give reason for the

1-Adaptation is an important trait of living organisms.

- Because it helps them to survive and reproduce in the ecosystem.

2-Some animals have the ability to make camouflage adaptation.

- To hide from their predators and preys in different environments.

3- The penguin has an insulating layer of fat and thick downy feathers.

- To trap warm air against skin.

4- The polar bears (or arctic foxes) have thick fur.

- To keep its body warm in the freezing cold.

5-Forest bears have dark or brown fur.

- To blend in with the trees while hunting (to make camouflage).

6-Polar bears (or arctic foxes) have white fur.

- To blend in with the snow while hunting (to make camouflage).

7-Arctic fox has short ears and legs.

- To help it stay warm.

8-Fennec fox has extra-large ears. (Fennec fox pants like dogs)

- To help it stay cool.

9-Panther chameleon is covered with colored scales.

- To make camouflage and hide between leaves and flowers.

10- Chameleons can move each of their eyes in a different direction.

- To help it catch its prey and avoid predation by another animal.

11- Panther chameleon has V-shaped feet and tail like a hand.

- To hold tightly the branches of trees.

12- Bull shark has sharp teeth.

- To sneak up its preys.

13- Bull sharks have less competition for finding food in fresh water.

- Because there is no other sharks live in fresh water.

14- Desert lizard looks for shade during hot sunny days.

- To keep its body cool.

15- The leaves of plants that float above the water surface are so wide.
- **To get large amount of sunlight.**

16- The shape of pine tree leaves is like a needle.
- **To prevent losing of water.**

17- Barbary fig has sharp spines.
- **To prevent animals from eating its fruits.**

18- Kapok tree has large wide roots that grow up on its trunk.
- **To firmly hold the tree.**

19- Kapok tree has hand-shaped leaves.
- **To prevent tearing by wind.**

20- Pine tree has a triangular shape and short branches.
- **To prevent breaking by snow falls.**

21- Saliva is very important in your mouth.
- **It moistens food to facilitate swallowing.**

22- The small intestine has tiny blood vessels.
- **To absorb the nutrients through its walls.**

23- The inhaled air is different from the exhaled air.
- **Because inhaled air carry oxygen gas while exhaled air carry carbon dioxide gas.**

24- Gills are unique structural adaptation in fish.
- **Because they help fish absorb oxygen from water to breath.**

25- Amphibians are endangered species.
- **Because their number is decreased in the last few years.**

26- Dogs are used in guarding.
- **Because they have sharp sense of hearing and smell.**

27- Dolphin can hear all kind of sounds.
- **Because it has sharp sense of hearing.**

28- A dolphin can locate living organisms and things under the surface of the water.
- **As it use echolocation property.**

29- Bats cannot see in the dark, but they hunt their prey at night.

- **Because it has sharp sense of hearing so can use echolocation.**

30- Owls can hunt during night.

- **Because they have extra-ordinary senses of hearing and sight.**

31- The jumping jerboa can jump for long distances.

- **Because it has long hind legs.**

32- Feet and toes of jerboa have hairs.

- **To catch sand when jump in zigzag paths.**

33- Some animals have a structural adaptation in their eyes.

- **To help them see at night.**

34- Some animals like cats have the ability to see in the dark.

- **Because they have mirror like membrane.**

35- Moon is not a source of light.

- **Because it reflects the sunlight.**

36- You can see an object placed behind a glass cup.

- **Because the glass cup is a transparent material that allow light to pass through.**

37- Mirror reflects light better than painted surface.

- **Because mirror is shiny and smooth while painted surface is rough.**

38- You can't see an object placed behind a wood door.

- **Because the wood door is opaque material that don't allow light to pass through.**

39- Fireflies produce a chemical reaction inside their bodies.

- **Because this allows them to light up to communicate.**

40- Fireflies use flashing light to communicate.

- **To warn off predators, or to attract a mate to reproduce.**

41- Humpback whales sing different songs.

- **To communicate with each other.**

42- The songs of Humpback whales have high pitched sounds in winter.

- **Because they travel better through cold water.**

43- The hearing sense is very important for bats.

- **Because they use sounds to communicate and to locate their preys.**

What happens if……?

1- Animals can’t adapt their environment.
- They can’t survive and reproduce.

2- The polar bears have thin fur instead of thick fur.
- It can’t adapt with the very cold weather.

3- Forest bears are coated with white fur.
- Cannot hide or hunt by camouflage.

4- Arctic fox has brown fur in winter, while it has white fur in summer.
- Cannot hide or hunt in winter or summer.

5- A plant is taken from its original habitat and placed in another different environment.
- It may die or may adapt with the new habitat to survive.

6- The small intestine is removed from the human body.
- The digestive system can’t do its function.

7- Diaphragm moves downward during inhalation.
- The size of chest increases and oxygen gas enter to lungs.

8- Diaphragm moves upward during exhalation.
- The size of chest decreases and carbon dioxide gas comes out lungs.

9- Owl can’t rotate its head in all direction.
- It can’t search for food everywhere.

10- The structure of fishing cat’s eyes is the same like human.
- Eyes can’t glow and fishing cat can’t see well at night.

11- Light falls on smooth and shiny surface.
- Light will reflect in one directions.

12- Light falls on rough surface.
- Light will reflect in different directions (scattered).

13- A firefly wants to attract mates.
- It produces chemical reaction and lights up.

14- The amount of food in ants colony decreases.
- Nurse ants send smelly messages to alert scout ants.

Answer the following questions:

1- Jerboa has long and strong hind legs that help him to jump quickly and escape when danger. Determine the type of adaptation.

Solution:

Structural adaptation: long and strong hind legs.

****

2- The husky dogs live in a cold environment, while another type of dogs live in a hot environment. In your opinion, which one has thick fur? And why?

Solution:

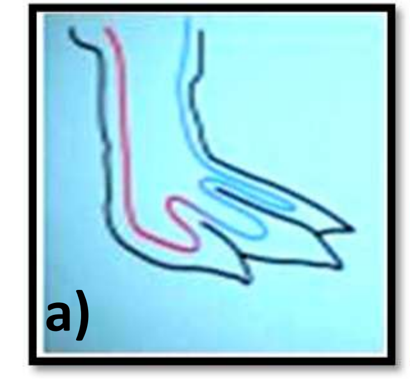
- The husky dogs that live in a cold environment.
- The thick fur keeps their body warm.

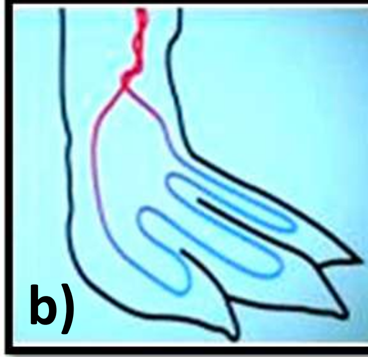
****

3- Which figure shows the correct structure of blood vessels in the feet of penguins? Explain how do this adaptation help penguins survive in cold climate ?

Figure (b).

Because Blood vessels weave around each other to keep its toes from freezing.





****

4-Panther chameleon puffs up its body with air for defense. What is the type of adaptation?

Behavioral adaptation.

****

5-Mohamed drives his bike and while that he hears a car behind him, he turns away so as not to hit it. Which system inside the body received a signal made Mohamed realize that?

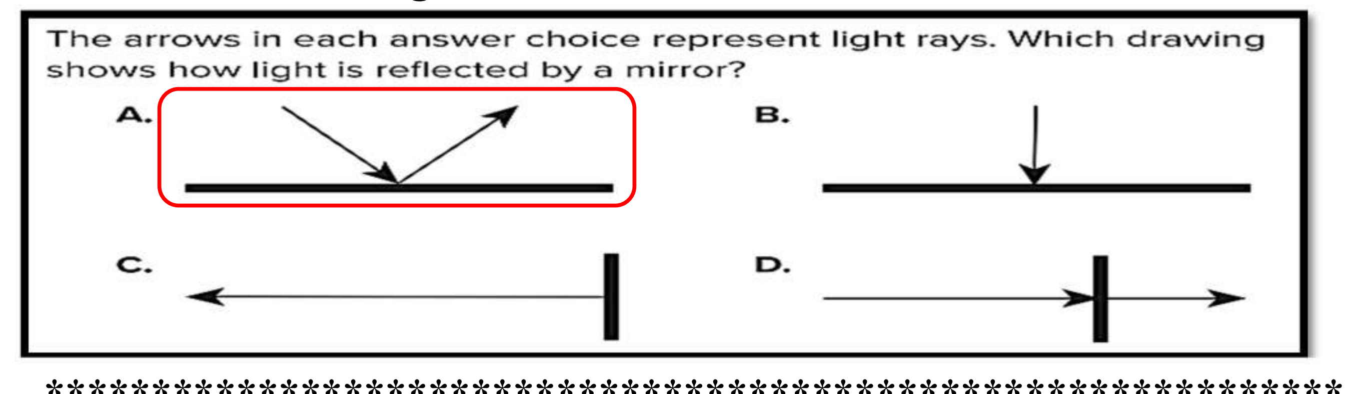
The nervous system

6-Adam hurt his toe when he climbed. How did he know that he had hurt his toe?

a) The nerves in his hurt toe sent a signal through his body to the brain.
b) The blood in his hurt toe sent a signal through his body to the brain.
c) Adam toes became very cold.
d) Adam toes became smaller.

****

7- choose the correct figure:



****

8- To see what was inside a box without having to open the box. What material should be used? (wood – mirror – transparent plastic – carton)

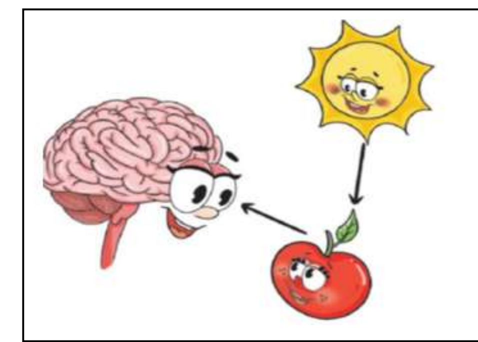
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9- To prevent the light from entering your room, suggest some materials that you can use to cover the window.

Solution: any opaque object like carton, wood, thick plastic.

****

10- look to the figure then complete:

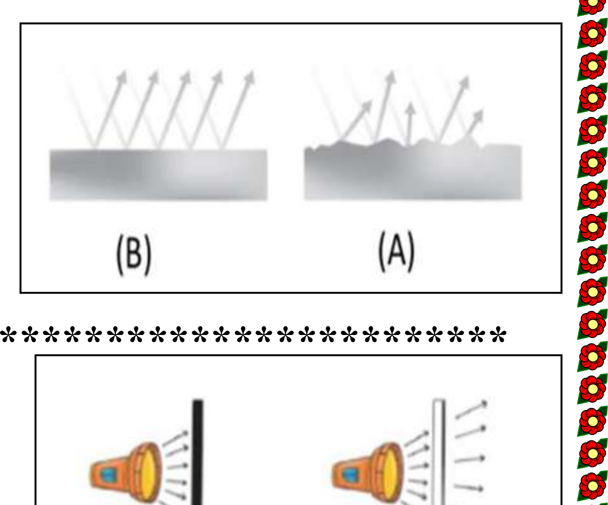


The light falls on the apple then it is reflected on the eyes , so the eyes transmit the message to brain then he interprets it and translates it, so we see the apple.

11- look to the figure then complete:

the surface represents the reflection of light rays from a wooden spoon is Surface A

Because it is a rough surface.

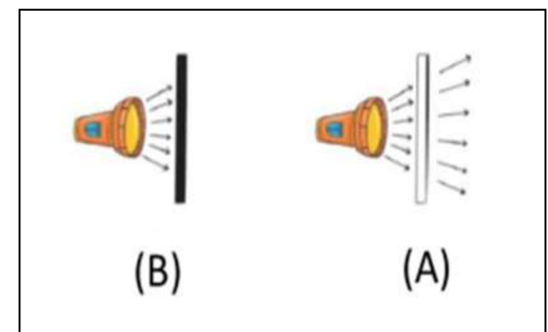


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12- look to the figure then complete:

Object (A) is (transparent – opaque).

Object (B) is (transparent – opaque).

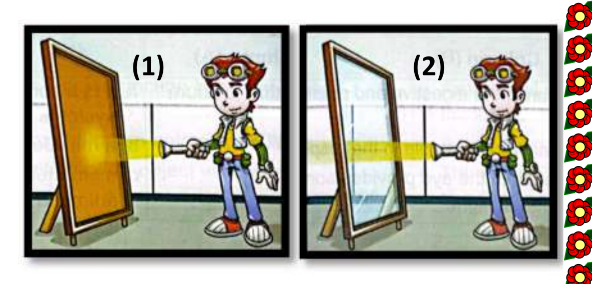


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13-look to the figure then complete:

the figure represents a transparent object is Figure 2

the figure represents an opaque object is Figure 1



****

14- Who I am: a body that appears light at night, but isn't considered as a source of light?

The moon.

****

15- What is a common mean of communication between some animals and human?

- **Using codes in form of sound, light, or movements.**

Cross out the odd word:

1- Penguin – polar bear – arctic fox – fennec fox.

2- Cactus plant – palm tree – Barbary fig – pine tree.

3- Acacia tree – polar bear – pine tree – penguin.

4- Mouth – lungs – stomach – small intestine.

5- Nose – trachea – anus – air sacs – lungs.

6- Toads – panther chameleon – frogs – salamanders.

7- Panther chameleon – starred agama lizard – bull shark – arctic fox.

8- Smell – taste – eye – hearing.

9- Eye – Nose – taste – skin.

10- Brain – spinal cord – nerves – stomach.

11-Sun – moon – flashlight – fire.

12-Moon – mirror – eye – candle.

13-Fishing cat – owl – dolphins – tarsier.

14-Wood – paper – metals – air.

15-Wood – glass – air – water.

16-Bats – fireflies – dolphins – blind person's cane.

Best wishes
Dr/ Zeinab Salah

Final Revision on unit 2

Complete the following sentences using the following words:

(1) (increases – balanced – Energy – gravity – unbalanced)

1-The force acting on body is …………………, so object move.

2-The force that pulls objects toward the center of Earth is ………………….

3-When the force acting on object increases the motion of the object ………………….

4-Object doesn't move when …………………force acting on it.

5-………………… gives us a force that enables us to do work.

****

(2) (elastic – thermal – Potential – light – electrical – Kinetic)

1-………………… energy is the amount of energy that is stored in an object due to its position.

2-………………… energy is the energy of an object due to its motion.

3-The energy stored in a compressed spring is ……………potential energy.

4-Electrical lamp operates with ………………… energy that changes to …………………and ………………… energy.

****

(3) (bigger – Airbag - increases - potential - more)

1-Fast cars cause damage ………………… than slow cars.

2-In cricket game, the speed of the ball ………………when the player hits it.

3-…………………is a big pillow in cars to land against during a crash.

4- The truck has engine ………………… than that of car.

5-In Newton's cradle the ball stores ………………… energy at the highest position.

(4) (forward – increases – collision - decreases – kinetic)

1-When a car uses brakes to decrease its speed, its kinetic energy …………

2-By increasing the mass of the object the kinetic energy ………………….

3-The moment where 2 objects hit in a forceful way is ………………….

4-When the car stops suddenly driver's body continues to move …………….

5-Object that has a big mass, has more …………………energy.

Complete the following sentences:

1- (Static – Moving) body doesn't move unless there's a (force – energy) acting on it.

2-When the position of a body changes according to a fixed point, the body (stops – moves).

3-(Energy – Force) is a push or pull that is applied to an object to change its (mass – position).

4-The moving object stop when it face another force that is (equal – unequal) in magnitude and in (opposite – same) direction.

5-Rope of tug war game moves toward the (greater – smaller) force when (balanced – unbalanced) force acting on it.

6-When we push a car gently, the car moves (slower – faster) and covers (short – long) distance.

7-(Energy – Work) is a force that causes an object to move a distance.

8-Opening a drawer is (push – pull) force, while kicking a ball is (push – pull) force.

9-Hitting a tennis ball needs a (pulling – pushing) force.

10-The shockwave truck has been fitted with (2 – 3) jet engines to increase its (mass – speed).

11-When you sit on the chair without moving. What is the name of the force that pulls you downward? (friction – gravity)

12-The seesaw moves up and down because the forces that act on it are (balanced – unbalanced).

13-The friction force acts in (same – opposite) direction of the object's movement to (stop – move) it.

14-By increasing the number of fire extinguishers, the speed of the cart will (decrease – increase).

15-The shockwave truck installed with 3 (jet engines – parachutes) to stop it, and this is the same idea of stopping a moving (truck – rocket).

16-The motion of the car is opposed by the (gravity – friction) of the air.

17-At the top of ramp object stores (gravitational- chemical) potential energy.

18-When you hold a ball it stores (potential – kinetic) energy, but when you let it falls down to the ground the ball has (potential – kinetic) energy.

19- When a person pushes a car forward, his body begins to sweat heavily because his body (consumes - increases) his stored energy.

20-Light and sound energies belong to (potential – kinetic) energy.

21-In gas oven the natural gas stored (chemical – electrical) energy that changes to (sound – thermal) energy.

22-When the roller coaster slides down fast, its kinetic energy (decreases –increases).

23-The speed of roller coaster when it moves toward the top of the hill is (more – less) than that when it moves down the ramp.

24-As the height of an object from the earth's surface increases, its potential energy (decreases –increases).

25-Which formula can be used to calculate speed? (distance/time – time/distance)

26-The speed is a measurement of how (long – fast) something is moving.

27-Object that move faster has more (potential – kinetic) energy.

28-When Malak travels with her bicycle a distance of 30 km in 2 hours, then she is moving at a speed of (20 km/hr. – 15 km/hr.).

29-A horse is faster than a human, as the human covers a (less – greater) distance at the same time.

30-(Kilometer – Meter) is a measuring unit for long distances.

31-If the acting forces on a moving body decrease, the speed of this body (decreases – increases).

32-As the angle of inclination increases the speed of object (increases – decreases) and its (potential – kinetic) energy increases.

33-The speed of objects differs according to their (mass – color).

34-Object moves a given distance in a shorter time is moving at a (greater – slower) speed.

35-Which of the following consumes less fuel? (a truck – a small car)

36-Car seat-belt is used to keep the driver from moving (forward – backward) during collision.

37- A train has kinetic energy (more than – less than) the car.

38-Kinetic energy is (lost – transferred) during collision.

Choose the correct answer:

1-When does the ball on the ground move?

a)It won't move. b) when a force acts on it.

c) when light falls on it. d) when gravity increase.

2-Which of the following indicate motion?

a) bicycle b) sunlight c)running water d) guitar string

3-When a body moves forward, the change that occurs is in ………..

a) the position of the body. b) the size of the body.

c) the mass of the body. d) the Earth's gravity.

4-Objects need a force to move, this force is called ……………….

a) pushing force only b) pulling force only

c) pushing and pulling together d) the gravity only

5-All the following considered as force except…………..

a) electric b) gravity c) push d) friction

6-All of the following are examples of motion, except………....

a) a running person b) a ball travelling through the air

c) a flying bird d) a sleeping dog.

7-The body moves slow or fast or change its direction due to a ………….. acting on it.

a) force b) wind c) gravity d) height

8-When we push or bull a car, this need ………………..

a) weight b) mass c) height d) energy

9-The force that makes the ball in the air fall down to the ground is………

a) friction b) gravity c) push d) light

10-The force that occurs when objects rub against each other is ……..…..

a) speed b) friction c) gravity d) wind

11-All of the following are examples of pulling force except……………

a)open a drawer b) kicking a ball

c) lifting a bag d)gravity

12-All of the following are examples of pushing force except…………

a)close a drawer b) kicking a ball

c) lifting a bag d) press on electrical switch

13-When ball stands on the ground without moving, the forces acting on it is……………………….

a) balanced b) unbalanced c) not equal d) pushing up

14-The amount of energy required to move an object through the force acting on is called…………………..

a) force b) work c) gravity d) pushing

15-When you clap your hands, kinetic energy of your hands becomes……..

a) sound energy only b) heat energy only.

c) sound energy and heat energy. d) chemical energy.

16- Which ball has kinetic energy but not potential energy?

a) a ball rolling down a ramp b) a ball sitting on a high shelf

c) a ball bouncing up and down d) a ball rolling on a flat sidewalk

17-Which type of energy change occurs when a person rides a bike?

a) heat energy changes to potential energy

b) chemical energy changes to kinetic energy

c) solar energy changes to chemical energy

d) kinetic energy changes to nuclear energy

18-Which of the following can store energy?

a) battery b) wire c) plastic d) rubber

19-The chemical energy stored in batteries is considered a form of ……….

a) kinetic energy b) potential energy

c) electrical energy d) mechanical energy

20-Heat energy is a type of…………………………………..

a) kinetic energy b) potential energy

c) electrical energy d) chemical energy

21-Potential energy of an object depends on…………………..

a) its mass only b) its shape

c) its height from the earth's surface only

d) its mass and its height from the earth's surface

22-In ……………….. electrical energy changes into heat energy.

a) battery b) electric iron c) radio d) hand bell

23-When roller coaster stops its kinetic energy…………………..

a) increased b) decreased c) doesn't change d) becomes zero

24-The roller coaster has the most energy of motion when it……………….

a) moves up to the top of hill b) moves down along the hill

c) stops at the top of hill d) stops at the bottom of hill

25-Scientists classify all forms of energy into 2 types which are…………….

a) chemical energy and kinetic energy

b) potential energy and kinetic energy

c) potential energy and electrical energy

d) sound energy and light energy

26-Chemical energy can be stored in………………………..

a) food b) batteries d) fuel d) all the previous

27-How is speed measured?

a) distance traveled per unit of time

b) time per unit of distance traveled

c) mass per unit of distance traveled

d) volume per unit of mass

28-If a Car covered a distance of 10 meters in a time of 2 seconds, so the speed of the car is…………………………

a) 50m/sec. b) 20m/sec. c) 5m/sec. d) 2m/sec.

29- The amount of kinetic energy of an object increases as ……….increases.

a) speed only b) mass only c) force only d) all the previous.

30-Gana is going down the slide. Her mother gives her a push. How does the push affect her motion down the slide?

a) The push decreases her speed.

b) The push increases her speed.

c) The push does not affect her speed.

d) The push stops her downward motion.

31-Which one of the following may cause the most damage?

a) A fast and heavy Vehicle. b) A slow and light Vehicle

c) A Big Vehicle. d) a and c

32-………… is (are) from the most important equipment during collision.

a) Brakes b) Car seat-belt c) Air bag d) b & c

33-Air bags are made of ………..…......... material.

a) thin b)rubber c) nylon d) a and c

34- From the elements which cause danger while driving cars………….

a) car tires b) seatbelts c) fast driving d) no correct answer

35- The collision between the bat and the ball results in ………….

a) Kinetic Energy b) Sound Energy

c) electric energy d) a and b.

36-Fast objects cause …………………………..

a) great damage that can be repaired.

b) great damage that can't be repaired.

c) small damage that can be repaired.

d) small damage that can't be repaired.

37- The effect of collision depends on the …………… of the moving objects.

a) speed b) direction c) color d) a and b

38- The collision between two moving objects produces …………… energy.

a) kinetic b) heat c) sound d) all the previous.

39- During collision, kinetic energy ....

a) transfers from the slow object to the fast object.

b) transfers from the fast object to the slow object.

c) is destroyed and lost in the air.

d) changes into potential energy.

40- The effect of collision increases by .... the speed of the moving object.

a) increasing b) decreasing c) keeping d) no correct answer.

41- During the collision of moving bodies, ...

a) energy transfer occurs. b) energy changes occur.

c) damage occurs. d) all the previous.

42- The car with speed .... has the highest kinetic energy.

a) 100 km/h b) 80 km/h c) 60 km/h d) 40 km/h

43- The kinetic energy of an object sliding on a ramp depends on the ....

a) angle of the ramp. b) mass of the object.

c) height of the ramp. d) all the previous.

44- In Newton's cradle the ball stores potential energy when ....

a) the ball is raised up. b) you leave the ball.

c) the ball hits the 1^{st} other ball. d) no correct answer.

45- In Newton's cradle the potential energy is converted gradually to kinetic energy when ....

a) the ball is raised up. b) you leave the ball.

c) the ball hits the 1^{st} other ball. d) no correct answer.

46- By increasing the mass of the object ....

a) The consuming fuel increases. b) the kinetic energy increases.

c) cause more damage during collision. d) all the previous.

47- What happens to the direction of the ball when hit with a bat?

a) Stay constant. b) Moves in the same direction.

c) Moves in a different direction. d) no correct answer.

Write the scientific term:

1-A change in the position of an object relative to a fixed point. (………….)
2-The ability to do work or make a change. (………….)
3-A force that moves an object away from you. (………….)
4-The force that tries to slow or stop an object moving on a surface. (………….)
5-The form of energy that increases when the speed of an object increases. (………….)
6-A type of fuel that is used inside gas oven to obtain thermal energy. (………….)
7-A type of fuel that is used inside car to obtain kinetic energy. (………….)
8-The distance travelled in a certain amount of time. (………….)
9-A very heavy steel ball that helps knock down walls. (………….)

Put (√) or (X) in front of the following statements:

1-When we push a car hardly, the car moves slower and covers long distance. ( )
2-The stopping object can't move until force acting on it. ( )
3-Force and energy are different but they are related to one another. ( )
4-When object moves upward the force acting on it is balanced. ( )
5- A force always causes movement. ( )
6-A force is a push or a pull. ( )
7-A static ball moves on the ground if it is affected by a force. ( )
8-The rotation of Earth around the sun is easy to be seen. ( )
9-The shockwave truck is one of the fastest and most powerful trucks in the world. ( )
10-If you move a chair through a distance, there is a work done. ( )
11-Human needs energy stored in food to do activities. ( )
12-Moving object has higher potential energy. ( )
13-In electric lamp the electrical energy changes to light and thermal energy. ( )

14-When you kick a ball, kinetic energy is produced. ( )

15-Existing energy can be destroyed or lost. ( )

16-In the electric fan, the kinetic energy is converted into electric energy.( )

17-Energy can be stored in many different forms. ( )

18-Energy can't be changed from one form to another. ( )

19-The moving objects only have energy, while the objects that don't move have no energy. ( )

20-When a car crashes into a wall, it will not stop. ( )

21-We can see the movement of electricity through a wire. ( )

22-The faster the speed of an object, the shorter distance it can travel in a set time. ( )

23-Energy is neither destroyed nor created from nothing. ( )

24-The faster the speed of an object, the less amount of time it takes to travel a set distance. ( )

25-The speed of an object increases as the amount of time traveled increases. ( )

26-The speed of an object is affected by the direction of this moving object. ( )

27-The speed of an object is measured in (m/sec) and (km/hr). ( )

28-All objects move at similar speeds around us. ( )

29-If you want an object to go slower, you must reduce its kinetic energy.( )

30-The more force applied to an object, the faster it goes. ( )

31-As the speed increases the potential energy increases. ( )

32-Objects has a big mass has less kinetic energy. ( )

33-Energy can be transformed easily from one form into another form. ( )

34- Light objects cause damage more than heavy objects. ( )

35-Kinetic Energy is transferred when two objects hit each other. ( )

36-Faster and heavier objects have more energy than slower lighter objects. ( )

37-The speed and kinetic energy of moving object on a ramp increased by decreasing the angle of the ramp. ( )

38-Slow moving object has less energy and causing less damage. ( )

Correct the underlined words:

1-Parked car is affected by unbalanced force. (………….)

2-When you move object toward you this represents pushing force. (………….)

3-Gravity pulls objects upward. (………….)

4-Push or pull actions are considered as types of energy. (………….)

5-Any object moves from its place when the forces acting on it are balanced. (………….)

6-There is a gravity force between the car tires and the road that acts to decrease its speed gradually. (………….)

7-A ball at the top of a hill stores electrical energy. (………….)

8- Potential energy is the gained energy during the motion of objects. (………….)

9-From the examples of kinetic energy, the bird which stays in its nest. (………….)

10-Pushing a car is an example of potential energy. (………….)

11-Gasoline contains electrical potential energy. (………….)

12-The friction force produces chemical energy. (………….)

13-Electricity is a form of energy found in the food we eat. (………….)

14-In electric bell, electrical energy changes into light energy. (………….)

15-The kinetic energy increases by increasing the height of the moving object. (………….)

16-The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec. (………….)

17-Damage will be less severe when two cars collide in the opposite direction. (………….)

18-Heavy objects always have less kinetic energy. (………….)

Choose from column (B) what suits it in column (A):

Column (A)	Column (B)
1-Used to knock down parts of a building.	a) Seatbelt
2-The air bag inflates automatically	b) after collision
3- Used in cars to keep body from moving forward.	c) sound energy
4- During collision, part of the kinetic energy changes into	d) Wrecking ball
5- The air bag deflates fast	e) during collision

1	2	3	4	5
…….	…….	…….	…….	…….

Give reason for the

1-When you kick a ball laying on the ground, it moves.

➢ ………………………………………………………………

2-If you let a pen out of your hand, it falls to the ground.

➢ ………………………………………………………………

3-If you push a ball on the table it moves for a distance till it stops.

➢ ………………………………………………………………

4-The Shockwave truck is faster than the normal truck.

➢ ………………………………………………………………

5-Engineers use parachutes in the Shockwave truck designs.

➢ ………………………………………………………………

6- The speed of roller coaster increases when it moves down the hill.

➢ ………………………………………………………………

7- When a player kicks a ball it moves in air.

➢ ………………………………………………………………

8- A bird stops on a tree has energy.

➢ ………………………………………………………………

9- When a stone is thrown upwards, its potential energy increases.

➢ ………………………………………………………………

10-When you hit a traffic sign post it may vibrate.

➢ ………………………………………………………………………

11-Seatbelts are very important equipment in cars.

➢ ………………………………………………………………………

12-When two objects collide with each other, you can hear a sound.

➢ ………………………………………………………………………

13-A truck needs a bigger engine than that of a small car to move with the same speed.

➢ ………………………………………………………………………

14-The truck causes more damage than cars during collision although they move at the same speed.

➢ ………………………………………………………………………

What happens if……?

1- The pulling forces of the two teams are equal in the tug-of-war game.

➢ ………………………………………………………………………

2- You kick a stopped ball on the ground.

➢ ………………………………………………………………………

3- You let your toy out of your hand.

➢ ………………………………………………………………………

4- If there were no energy on earth.

➢ ………………………………………………………………………

5- Increasing the mass of an object that moves down a ramp.

(according to the kinetic energy)

➢ ………………………………………………………………………

6- You turn on the T.V. (according to the change of energy).

➢ ………………………………………………………………………

7- The roller coaster moves down the hill.

(according to the change of energy)

➢ ………………………………………………………………………

8- You put a battery inside a flashlight then switch it on.
(according to the change of energy)

➢ ……………………………………………………………………

9- If you operate a washing machine. (according to the change of energy)

➢ ……………………………………………………………………

10- The moving cricket bat hits a ball. (according to the transfer of energy).

➢ ……………………………………………………………………

11- The speed of a moving car increases. (according to kinetic energy)

➢ ……………………………………………………………………

12- You let the ball of Newton's cradle moves toward the rest of balls.
(according to the change of energy)

➢ ……………………………………………………………………

Answer the following questions:

1- Which of these 2 cars is affected by a greater Force? Explain why?

Original position
70 cm
B
35 cm

……………………………………………………………
……………………………………………………………

****

2- In picture (1) energy is changed from

………….. energy to ………….. energy.

In picture (2) energy is changed from

………….. energy to ………….. energy.

dts
(1) (2)

****

3- In the opposite picture position (3) represent the most ……………….energy.
(potential – kinetic).

1 2 3 4

4- In the opposite figures which ball has the greatest potential energy? Explain why?

……………………………………………………………

……………………………………………………………

(1) (2) (3) (4)

****

5- In the opposite figure:

When the compressed spring is released,

a change in energy occurs from

………..……….. energy to ………….. energy.

****

6- From the following figure complete:

(different – wooden – bat – sound – ball – increases – kinetic)

a) The boy uses a ………….. bat to hit the ball.

b) ..…..energy is transferred from the ….…..to the ………

c) When the boy hit the ball the speed of the ball

……….….. in …………..direction.

d) During collision some of the kinetic energy changed into ………… energy.

****

7- From the following figure that shows Newton's cradle complete:

a) When the ball is raised up, it stores ………….. energy.

b) When leaving the ball moves in the direction of the rest balls the ………….. energy decreases and ……… energy increases.

c) During collision some of the kinetic energy changed into ………….. energy due to the friction.

8- In the opposite figure which ball will reach the ground first? Explain why?

……………………………………………………………………………

……………………………………………………………………………

****

9- Calculate that speed of a runner that covers 150 meters in 10 seconds.

……………………………………………………………………

****

10- Calculate the speed of a train that covers 600 kilometers in a time of 6 hours.

……………………………………………………………………

****

11- Find the speed of a runner, if you know that he covers 400 meters in 80 seconds.

……………………………………………………………………

****

12- If the two cars moved at the same time for 20 seconds, car (A) covered a distance of 100 meters, while car (B) covered a distance of 300 meters. Which of the two cars has a higher speed?

……………………………………………………………………

****

13- If one runner travels 10 kilometers in 1 hour and a second runner travels 10 kilometers in half hour. Which of the two runners has a higher speed?

……………………………………………………………………

Cross out the odd word:

1- Sound energy – light energy – chemical energy – thermal energy.

2- Sound energy – light energy – electrical energy – thermal energy.

3- Speed – color – time – distance.

Best wishes
Dr/ Zeinab Salah

Final Revision on unit 2

Complete the following sentences using the following words:

(1) (increases – balanced – Energy – gravity – unbalanced)

1-The force acting on body is unbalanced, so object move.

2-The force that pulls objects toward the center of Earth is gravity.

3-When the force acting on object increases the motion of the object increases.

4-Object doesn't move when balanced force acting on it.

5-Energy gives us a force that enables us to do work.

****

(2) (elastic – thermal – Potential – light – electrical – Kinetic)

1-Potential energy is the amount of energy that is stored in an object due to its position.

2-Kinetic energy is the energy of an object due to its motion.

3-The energy stored in a compressed spring is elastic potential energy.

4-Electrical lamp operates with electrical energy that changes to thermal and light energy.

****

(3) (bigger – Airbag - increases - potential - more)

1-Fast cars cause damage more than slow cars.

2-In cricket game, the speed of the ball increases when the player hits it.

3-Airbag is a big pillow in cars to land against during a crash.

4- The truck has engine bigger than that of car.

5-In Newton's cradle the ball stores potential energy at the highest position.

(4) (forward – increases – collision - decreases – kinetic)

1-When a car uses brakes to decrease its speed, its kinetic energy decreases.

2-By increasing the mass of the object the kinetic energy increases.

3-The moment where 2 objects hit in a forceful way is collision.

4-When the car stops suddenly driver's body continues to move forward.

5-Object that has a big mass, has more kinetic energy.

Complete the following sentences:

1- (Static – Moving) body doesn't move unless there's a (force – energy) acting on it.

2-When the position of a body changes according to a fixed point, the body (stops – moves).

3-(Energy – Force) is a push or pull that is applied to an object to change its (mass – position).

4-The moving object stop when it face another force that is (equal – unequal) in magnitude and in (opposite – same) direction.

5-Rope of tug war game moves toward the (greater – smaller) force when (balanced – unbalanced) force acting on it.

6-When we push a car gently, the car moves (slower – faster) and covers (short – long) distance.

7-(Energy – Work) is a force that causes an object to move a distance.

8-Opening a drawer is (push – pull) force, while kicking a ball is (push – pull) force.

9-Hitting a tennis ball needs a (pulling – pushing) force.

10-The shockwave truck has been fitted with (2 – 3) jet engines to increase its (mass – speed).

11-When you sit on the chair without moving. What is the name of the force that pulls you downward? (friction – gravity)

12-The seesaw moves up and down because the forces that act on it are (balanced – unbalanced).

13-The friction force acts in (same – opposite) direction of the object's movement to (stop – move) it.

14-By increasing the number of fire extinguishers, the speed of the cart will (decrease – increase).

15-The shockwave truck installed with 3 (jet engines – parachutes) to stop it, and this is the same idea of stopping a moving (truck – rocket).

16-The motion of the car is opposed by the (gravity – friction) of the air.

17-At the top of ramp object stores (gravitational- chemical) potential energy.

18-When you hold a ball it stores (potential – kinetic) energy, but when you let it falls down to the ground the ball has (potential – kinetic) energy.

19- When a person pushes a car forward, his body begins to sweat heavily because his body (consumes - increases) his stored energy.

20-Light and sound energies belong to (potential – kinetic) energy.

21-In gas oven the natural gas stored (chemical – electrical) energy that changes to (sound – thermal) energy.

22-When the roller coaster slides down fast, its kinetic energy (decreases –increases).

23-The speed of roller coaster when it moves toward the top of the hill is (more – less) than that when it moves down the ramp.

24-As the height of an object from the earth's surface increases, its potential energy (decreases –increases).

25-Which formula can be used to calculate speed? (distance/time – time/distance)

26-The speed is a measurement of how (long – fast) something is moving.

27-Object that move faster has more (potential – kinetic) energy.

28-When Malak travels with her bicycle a distance of 30 km in 2 hours, then she is moving at a speed of (20 km/hr. – 15 km/hr.).

29-A horse is faster than a human, as the human covers a (less – greater) distance at the same time.

30-(Kilometer – Meter) is a measuring unit for long distances.

31-If the acting forces on a moving body decrease, the speed of this body (decreases – increases).

32-As the angle of inclination increases the speed of object (increases – decreases) and its (potential – kinetic) energy increases.

33-The speed of objects differs according to their (mass – color).

34-Object moves a given distance in a shorter time is moving at a (greater – slower) speed.

35-Which of the following consumes less fuel? (a truck – a small car)

36-Car seat-belt is used to keep the driver from moving (forward – backward) during collision.

37- A train has kinetic energy (more than – less than) the car.

38-Kinetic energy is (lost – transferred) during collision.

Choose the correct answer:

1-When does the ball on the ground move?

a)It won't move. b) when a force acts on it.

c) when light falls on it. d) when gravity increase.

2-Which of the following indicate motion?

a) bicycle b) sunlight c)running water d) guitar string

3-When a body moves forward, the change that occurs is in ………..

a) the position of the body. b) the size of the body.

c) the mass of the body. d) the Earth's gravity.

4-Objects need a force to move, this force is called ……………….

a) pushing force only b) pulling force only

c) pushing and pulling together d) the gravity only

5-All the following considered as force except…………..

a) electric b) gravity c) push d) friction

6-All of the following are examples of motion, except………....

a) a running person b) a ball travelling through the air

c) a flying bird d) a sleeping dog.

7-The body moves slow or fast or change its direction due to a ………….. acting on it.

a) force b) wind c) gravity d) height

8-When we push or bull a car, this need ………………..

a) weight b) mass c) height d) energy

9-The force that makes the ball in the air fall down to the ground is………

a) friction b) gravity c) push d) light

10-The force that occurs when objects rub against each other is ……..…..

a) speed b) friction c) gravity d) wind

11-All of the following are examples of pulling force except……………

a)open a drawer b) kicking a ball

c) lifting a bag d)gravity

12-All of the following are examples of pushing force except…………

a)close a drawer b) kicking a ball

c) lifting a bag d) press on electrical switch

13-When ball stands on the ground without moving, the forces acting on it is……………………….

a) balanced b) unbalanced c) not equal d) pushing up

14-The amount of energy required to move an object through the force acting on is called…………………..

a) force b) work c) gravity d) pushing

15-When you clap your hands, kinetic energy of your hands becomes……..

a) sound energy only b) heat energy only.

c) sound energy and heat energy. d) chemical energy.

16- Which ball has kinetic energy but not potential energy?

a) a ball rolling down a ramp b) a ball sitting on a high shelf

c) a ball bouncing up and down d) a ball rolling on a flat sidewalk

17-Which type of energy change occurs when a person rides a bike?

a) heat energy changes to potential energy

b) chemical energy changes to kinetic energy

c) solar energy changes to chemical energy

d) kinetic energy changes to nuclear energy

18-Which of the following can store energy?

a) battery b) wire c) plastic d) rubber

19-The chemical energy stored in batteries is considered a form of ……….

a) kinetic energy b) potential energy

c) electrical energy d) mechanical energy

20-Heat energy is a type of…………………………………..

a) kinetic energy b) potential energy

c) electrical energy d) chemical energy

21-Potential energy of an object depends on…………………..

a) its mass only b) its shape

c) its height from the earth's surface only

d) its mass and its height from the earth's surface

22-In ……………….. electrical energy changes into heat energy.

a) battery b) electric iron c) radio d) hand bell

23-When roller coaster stops its kinetic energy…………………..

a) increased b) decreased c) doesn't change d) becomes zero

24-The roller coaster has the most energy of motion when it……………….

a) moves up to the top of hill b) moves down along the hill

c) stops at the top of hill d) stops at the bottom of hill

25-Scientists classify all forms of energy into 2 types which are…………….

a) chemical energy and kinetic energy

b) potential energy and kinetic energy

c) potential energy and electrical energy

d) sound energy and light energy

26-Chemical energy can be stored in………………………..

a) food b) batteries d) fuel d) all the previous

27-How is speed measured?

a) distance traveled per unit of time

b) time per unit of distance traveled

c) mass per unit of distance traveled

d) volume per unit of mass

28- If a Car covered a distance of 10 meters in a time of 2 seconds, so the speed of the car is…………………………

a) 50m/sec. b) 20m/sec. c) 5m/sec. d) 2m/sec.

29- The amount of kinetic energy of an object increases as ……….increases.

a) speed only b) mass only c) force only d) all the previous.

30- Gana is going down the slide. Her mother gives her a push. How does the push affect her motion down the slide?

a) The push decreases her speed.

b) The push increases her speed.

c) The push does not affect her speed.

d) The push stops her downward motion.

31- Which one of the following may cause the most damage?

a) A fast and heavy Vehicle. b) A slow and light Vehicle

c) A Big Vehicle. d) a and c

32- ………… is (are) from the most important equipment during collision.

a) Brakes b) Car seat-belt c) Air bag d) b & c

33- Air bags are made of ………..…......... material.

a) thin b)rubber c) nylon d) a and c

34- From the elements which cause danger while driving cars…………..

a) car tires b) seatbelts c) fast driving d) no correct answer

35- The collision between the bat and the ball results in …………..

a) Kinetic Energy b) Sound Energy

c) electric energy d) a and b.

36- Fast objects cause …………………………..

a) great damage that can be repaired.

b) great damage that can't be repaired.

c) small damage that can be repaired.

d) small damage that can't be repaired.

37- The effect of collision depends on the …………… of the moving objects.

a) speed b) direction c) color d) a and b

38- The collision between two moving objects produces …………… energy.

a) kinetic b) heat c) sound d) all the previous.

39- During collision, kinetic energy ....

a) transfers from the slow object to the fast object.

b) transfers from the fast object to the slow object.

c) is destroyed and lost in the air.

d) changes into potential energy.

40- The effect of collision increases by .... the speed of the moving object.

a) increasing b) decreasing c) keeping d) no correct answer.

41- During the collision of moving bodies, ...

a) energy transfer occurs. b) energy changes occur.

c) damage occurs. d) all the previous.

42- The car with speed .... has the highest kinetic energy.

a) 100 km/h b) 80 km/h c) 60 km/h d) 40 km/h

43- The kinetic energy of an object sliding on a ramp depends on the ....

a) angle of the ramp. b) mass of the object.

c) height of the ramp. d) all the previous.

44- In Newton's cradle the ball stores potential energy when ....

a) the ball is raised up. b) you leave the ball.

c) the ball hits the 1st other ball. d) no correct answer.

45- In Newton's cradle the potential energy is converted gradually to kinetic energy when ....

a) the ball is raised up. b) you leave the ball.

c) the ball hits the 1st other ball. d) no correct answer.

46- By increasing the mass of the object ....

a) The consuming fuel increases. b) the kinetic energy increases.

c) cause more damage during collision. d) all the previous.

47- What happens to the direction of the ball when hit with a bat?

a) Stay constant. b) Moves in the same direction.

c) Moves in a different direction. d) no correct answer.

Write the scientific term:

1-A change in the position of an object relative to a fixed point. (Motion)
2-The ability to do work or make a change. (Energy)
3-A force that moves an object away from you. (pushing force)
4-The force that tries to slow or stop an object moving on a surface. (friction force)
5-The form of energy that increases when the speed of an object increases. (kinetic energy)
6-A type of fuel that is used inside gas oven to obtain thermal energy. (natural gas)
7-A type of fuel that is used inside car to obtain kinetic energy. (gasoline)
8-The distance travelled in a certain amount of time. (speed)
9-A very heavy steel ball that helps knock down walls. (Wrecking ball)

Put (√) or (X) in front of the following statements:

1-When we push a car hardly, the car moves slower and covers long distance. (X)
2-The stopping object can't move until force acting on it. (√)
3-Force and energy are different but they are related to one another. (√)
4-When object moves upward the force acting on it is balanced. (X)
5- A force always causes movement. (X)
6-A force is a push or a pull. (√)
7-A static ball moves on the ground if it is affected by a force. (√)
8-The rotation of Earth around the sun is easy to be seen. (X)
9-The shockwave truck is one of the fastest and most powerful trucks in the world. (√)
10-If you move a chair through a distance, there is a work done. (√)
11-Human needs energy stored in food to do activities. (√)
12-Moving object has higher potential energy. (X)
13-In electric lamp the electrical energy changes to light and thermal energy. (√)

14-When you kick a ball, kinetic energy is produced. (√)

15-Existing energy can be destroyed or lost. (X)

16-In the electric fan, the kinetic energy is converted into electric energy.(X)

17-Energy can be stored in many different forms. (√)

18-Energy can't be changed from one form to another. (X)

19-The moving objects only have energy, while the objects that don't move have no energy. (X)

20-When a car crashes into a wall, it will not stop. (X)

21-We can see the movement of electricity through a wire. (X)

22-The faster the speed of an object, the shorter distance it can travel in a set time. (X)

23-Energy is neither destroyed nor created from nothing. (√)

24-The faster the speed of an object, the less amount of time it takes to travel a set distance. (√)

25-The speed of an object increases as the amount of time traveled increases. (X)

26-The speed of an object is affected by the direction of this moving object. (X)

27-The speed of an object is measured in (m/sec) and (km/hr). (√)

28-All objects move at similar speeds around us. (X)

29-If you want an object to go slower, you must reduce its kinetic energy.(√)

30-The more force applied to an object, the faster it goes. (√)

31-As the speed increases the potential energy increases. (X)

32-Objects has a big mass has less kinetic energy. (X)

33-Energy can be transformed easily from one form into another form. (√)

34- Light objects cause damage more than heavy objects. (X)

35-Kinetic Energy is transferred when two objects hit each other. (√)

36-Faster and heavier objects have more energy than slower lighter objects. (√)

37-The speed and kinetic energy of moving object on a ramp increased by decreasing the angle of the ramp. (X)

38-Slow moving object has less energy and causing less damage. (√)

Correct the underlined words:

1-Parked car is affected by unbalanced force. (balanced)

2-When you move object toward you this represents pushing force. (pulling)

3-Gravity pulls objects upward. (downward)

4-Push or pull actions are considered as types of energy. (force)

5-Any object moves from its place when the forces acting on it are balanced. (unbalanced)

6-There is a gravity force between the car tires and the road that acts to decrease its speed gradually. (friction)

7-A ball at the top of a hill stores electrical energy. (potential)

8- Potential energy is the gained energy during the motion of objects. (kinetic)

9-From the examples of kinetic energy, the bird which stays in its nest. (potential)

10-Pushing a car is an example of potential energy. (kinetic)

11-Gasoline contains electrical potential energy. (chemical)

12-The friction force produces chemical energy. (thermal)

13-Electricity is a form of energy found in the food we eat. (chemical energy)

14-In electric bell, electrical energy changes into light energy. (sound)

15-The kinetic energy increases by increasing the height of the moving object. (speed)

16-The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec. (km/hr)

17-Damage will be less severe when two cars collide in the opposite direction. (same)

18-Heavy objects always have less kinetic energy. (Light)

Choose from column (B) what suits it in column (A):

Column (A)	Column (B)
1-Used to knock down parts of a building.	a) Seatbelt
2-The air bag inflates automatically	b) after collision
3- Used in cars to keep body from moving forward.	c) sound energy
4- During collision, part of the kinetic energy changes into	d) Wrecking ball
5- The air bag deflates fast	e) during collision

1	2	3	4	5
d	e	a	c	b

Give reason for the

1-When you kick a ball laying on the ground, it moves.

- ➢ **Due to the pushing force of your leg that acts on it.**

2-If you let a pen out of your hand, it falls to the ground.

- ➢ **Due to the pulling force of the gravity downward.**

3-If you push a ball on the table it moves for a distance till it stops.

- ➢ **Due to friction force between the ball and the table.**

4-The Shockwave truck is faster than the normal truck.

- ➢ **Because the Shockwave truck has three jet engines.**

5-Engineers use parachutes in the Shockwave truck designs.

- ➢ **To help slow down the Shockwave truck.**

6- The speed of roller coaster increases when it moves down the hill.

- ➢ **Because its kinetic energy increases.**

7- When a player kicks a ball it moves in air.

- ➢ **Because the kinetic energy transfers from the player's foot to the ball.**

8- A bird stops on a tree has energy.

- ➢ **Because it has potential energy due to its height from the ground.**

9- When a stone is thrown upwards, its potential energy increases.

- ➢ **Because its height increases.**

10- When you hit a traffic sign post it may vibrate.

- Because kinetic energy is transferred from my body to the sign post.

11- Seatbelts are very important equipment in cars.

- To prevent body move forward.

12- When two objects collide with each other, you can hear a sound.

- Because a part of kinetic energy changes into sound energy.

13- A truck needs a bigger engine than that of a small car to move with the same speed.

- Because the truck has more mass than the car.

14- The truck causes more damage than cars during collision although they move at the same speed.

- Because the truck has big engine and more kinetic energy than cars.

What happens if……?

1- The pulling forces of the two teams are equal in the tug-of-war game.

- The rope will not move.

2- You kick a stopped ball on the ground.

- It starts to move on the ground.

3- You let your toy out of your hand.

- It will fall down on the ground due to the pulling force of gravity.

4- If there were no energy on earth.

- Nothing would get done.

5- Increasing the mass of an object that moves down a ramp.
(according to the kinetic energy)

- The kinetic energy increases.

6- You turn on the T.V. (according to the change of energy).

- Electrical energy is converted into light and sound energy.

7- The roller coaster moves down the hill.
(according to the change of energy)

- Potential energy changed into kinetic energy.

8- You put a battery inside a flashlight then switch it on. (according to the change of energy)

➢ Chemical energy is changed into light and thermal energies.

9- If you operate a washing machine. (according to the change of energy)

➢ The electrical energy changes into mechanical energy.

10- The moving cricket bat hits a ball. (according to the transfer of energy).

➢ The kinetic energy of the bat transfers to the ball.

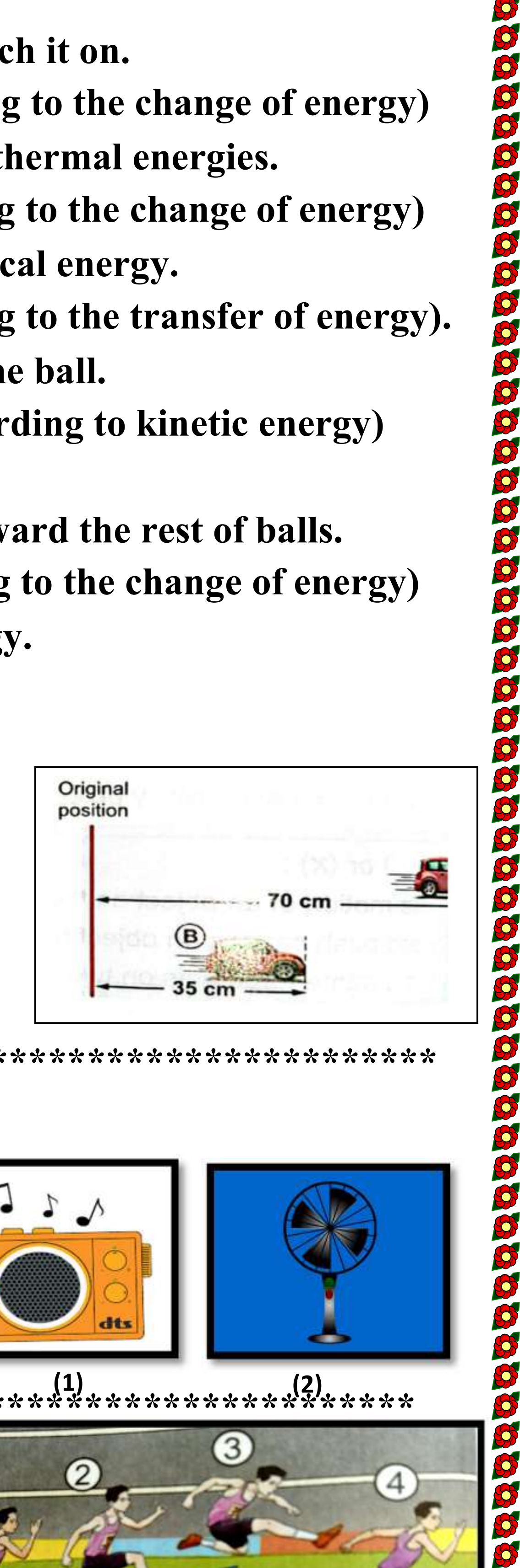
11- The speed of a moving car increases. (according to kinetic energy)

➢ Kinetic energy will increase.

12- You let the ball of Newton's cradle moves toward the rest of balls. (according to the change of energy)

➢ Potential energy changed into kinetic energy.

Answer the following questions:



1- Which of these 2 cars is affected by a greater Force? Explain why?

Car (A) because it moves longer distance than car (B)

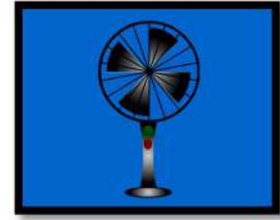
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2- In picture (1) energy is changed from electrical energy to sound energy.

In picture (2) energy is changed from electrical energy to kinetic energy.



(1)

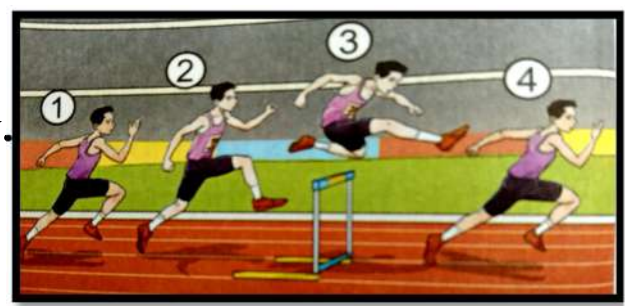


(2)

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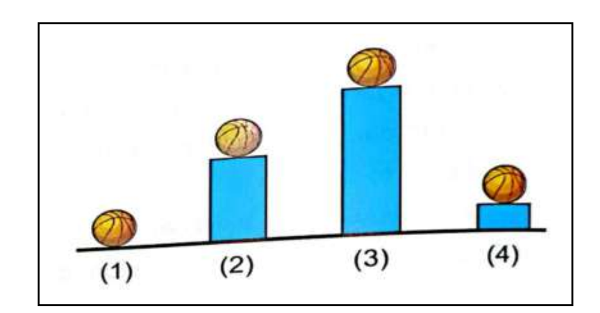
3- In the opposite picture position (3) represent the most ……………….energy.

(potential – kinetic)



4- In the opposite figures which ball has the greatest potential energy? Explain why?

Ball number (3), because it has the greatest height.



****

5- In the opposite figure:

When the compressed spring is released, a change in energy occurs from elastic potential energy to kinetic energy.



****

6- From the following figure complete:

(different – wooden – bat – sound – ball – increases – kinetic)



a) The boy uses a wooden bat to hit the ball.

b) Kinetic energy is transferred from the bat to the ball.

c) When the boy hit the ball the speed of the ball increases in different direction.

d) During collision some of the kinetic energy changed into sound energy.

****

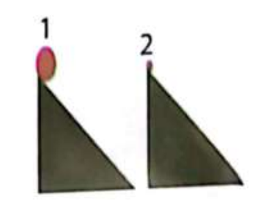
7- From the following figure that shows Newton's cradle complete:

a) When the ball is raised up, it stores potential energy.

b) When leaving the ball moves in the direction of the rest balls the potential energy decreases and kinetic energy increases.

c) During collision some of the kinetic energy changed into thermal energy due to the friction.

8- In the opposite figure which ball will reach the ground first? Explain why?



Ball number 1 will reach the ground first,
because it has a big mass than ball number 2.

****

9- Calculate that speed of a runner that covers 150 meters in 10 seconds.

Speed = distance ÷ time = 150 ÷ 10 = 15 m/s

****

10- Calculate the speed of a train that covers 600 kilometers in a time of 6 hours.

Speed = distance ÷ time = 600 ÷ 6 = 100 km/hr.

****

11- Find the speed of a runner, if you know that he covers 400 meters in 80 seconds.

Speed = distance ÷ time = 400 ÷ 80 = 5 m/sec.

****

12- If the two cars moved at the same time for 20 seconds, car (A) covered a distance of 100 meters, while car (B) covered a distance of 300 meters. Which of the two cars has a higher speed?

Car (B), because it travels longer distance than (A).

****

13- If one runner travels 10 kilometers in 1 hour and a second runner travels 10 kilometers in half hour. Which of the two runners has a higher speed?

The second runner, because it takes shorter time.

Cross out the odd word:

1- Sound energy – light energy – chemical energy – thermal energy.

2- Sound energy – light energy – electrical energy – thermal energy.

3- Speed – color – time – distance.

Best wishes
Dr/ Zeinab Salah

مجانا وحصريا

حمل الآن

المراجعة رقم (3)









Final Revision

Mr. Ahmed Elbasha

(1) Choose the right answer:

1. The system responsible for moving your hand away from danger, such as touching a hot cup of tea, is the .... system.

a. digestive b. respiratory c. nervous d. stomach

2. Songs of humpback whales in winter are characterized by each of the following, except ....

a. it is for mating season. b. moving better through cold water.

c. having soft sounds. d. having low-pitched sounds.

3. When you move something toward you, this represents ....

a. pushing force. b. light energy. c. pulling force. d. sound energy.

4. Which of the following sentences describes the friction force ? ....

a. It pulls objects toward the ground.

b. It pushes objects away from the ground.

c. It slows down or stops the moving objects.

d. It doesn't affect the moving objects.

5. In penguin's body, the insulating layer of fat and dense feathers protect its body from ....

a. cold air. b. cold water. c. warm water. d. warm air.

6. The energy that is stored in an object due to its position, is known as ....

a. kinetic energy. b. potential energy.

c. electrical energy. d. chemical energy.

7. When you see a car coming toward you, the sensory receptors .... to get away from it.

a. in the ears send a signal to the brain first

b. in the eyes send a signal to the brain first

c. in the eyes send a signal to sensory receptors in the ears

d. in the ears send a signal to sensory receptors in the eyes

8. The potential energy of an object depends on ....

a. its mass only.

b. its height from the Earth's surface only.

c. its mass and its height from the Earth's surface.

d. its temperature.

9. .... is considered as a behavioral adaptation in the panther chameleon.

a. Puffing up its body during danger

b. Each eye can move independently

c. V-shaped feet d. Long sticky tongue

10. From the structural adaptation of water lily plant is that ....

a. it has long roots. b. it has sharp spines.

c. it has tiny leaves. d. it has wide leaves.

11. When a car suddenly stops, the passengers move ....

a. backward. b. forward. c. upward. d. downward.

12. Reading and writing are common types of communication in .... world.

a. humans b. animals c. birds d. plants

13. Bears that live in forests have fur .... that of polar bears.

a. whiter than b. darker than

c. similar to d. brighter than

14. Pine tree has a triangular shape to make snow slides over its branches without breaking it. This structural adaptation makes this tree face the extreme cold climate like the feet of ....

a. caracal. b. penguin. c. fennec fox. d. brown bear.

15. If there is nothing to stop the movement of an object, this object will ....

a. stay in motion. b. suddenly stop.

c. stop after few minutes. d. stop after few seconds.

16. Camouflage means that the animal ....

a. can be seen easily among its surrounding. b. is hard to be seen among its surrounding.

c. is easily to be seen by its preys. d. can be seen easily by its predators.

17. Umbrella-shaped trees include ....

a. mangrove tree and acacia tree. b. mangrove tree and kapok tree.

c. acacia tree and kapok tree. d. barbary fig and water lilies.

18. The five senses of humans and animals include ....

a. sight, hearing, touch, smell, and movement.

b. sight, movement, taste, touch, and smell.

c. taste, touch, movement, hearing, and smell.

d. sight, hearing, taste, smell, and touch.

19. If the angle of inclination of a ramp increases, the kinetic energy of an object moving down it will ....

a. decrease. b. increase. c. remain as it is. d. be destroyed.

20. The mirror-like membrane present at the back of eyes of ....

a. humans only. b. cats only.

c. both humans and cats. d. neither humans nor cats.

21. Fennec foxes and arctic foxes live in burrows, this belongs to .... adaptation.

a. only structural b. only behavioral

c. both structural and behavioral d. neither structural nor behavioral

22. The blind person's cane and .... emit a high-pitched sound that bounces off objects forming an echo.

a. lizards b. polar bears c. bull sharks d. bats

23. Speed is a measurement of how .... something is moving.

a. long b. tall c. fast d. heavy

24. A very big truck needs .... to move.

a. very small engine b. small engine

c. very big engine d. no engine

25. Push or pull actions are considered as types of ....

a. force. b. device. c. energy. d. adaptation.

26. The nervous system can do all the following functions, except ....

a. gathering information. b. processing information.

c. sending signals. d. falling of rains.

27. The speed of an object is measured in .... or meters per second.

a. kilograms per hour b. grams per second

c. kilometers per hour d. kilograms per kilometers

28. .... are animals that become active at night.

a. Reptiles b. Amphibians c. Nocturnal animals

29. The friction force produces .... energy.

a. thermal b. chemical c. electrical

30. When an object is in motion, this means that its .... changes.

a. color b. shape c. position d. size

31. When you move something toward you, this represents ....

a. pulling force. b. light energy. c. pushing force. d. sound energy.

32. Animals that are active at night are called .... animals.

a. diurnal b. nocturnal c. endangered d. extinct

33. The ability to rotate head in all directions is well-known in ....

a. owl. b. jerboa. c. snake. d. dolphin.

34. There is a .... force between the car's tires and the road that decreases its speed gradually.

a. gravity b. friction c. push d. pull

35. .... is the ability to do work or make a change.

a. Speed b. Work c. Energy d. Displacement

36. When the force acting on a moving body increases, its speed will ....

a. increase. b. decrease.

c. remain constant. d. stop.

37. The energy that is stored in an object due to its position, is known as .... energy.

a. kinetic b. potential c. sound d. light

38. Bull sharks can live in ....

a. fresh water. b. salt water. c. both.

39. .... is a behavioral adaptation in acacia tree.

a. Very long root b. Sharp spines c. Production poison

40. A ball at the top of the hill stores .... energy.

a. potential b. sound c. kinetic

41. .... passes the food from pharynx to stomach.

a. Esophagus b. Stomach c. Trachea d. Alveoli

42. Paper and wood are .... materials.

a. opaque b. transparent c. liquids d. gaseous

43. Penguin's feet have blood vessels that bring .... from up to his feet.

a. warm blood b. cold blood c. warm water d. cold water

44.................... produce high pitched sound during winter.

a. Owls b. Humpback whales c. Toads

45. The form of energy that can be seen is .... energy.

a. thermal b. electrical c. sound d. light

46. The body of arctic fox covered with ....

a. skin. b. thick fur. c. feathers. d. scales.

47. Fish breathe oxygen dissolved in water by ....

a. lungs. b. gills. c. skin. d. fins.

48. By increasing the speed of moving object, the kinetic energy will ....

a. increase. b. decrease. c. still constant. d. be slower

49. The chemical energy stored in batteries is considered a form of ....

a. potential energy. b. kinetic energy. c. heat energy. d. light energy.

50. All of the following are components of nervous system, except ....

a. spinal cord. b. heart. c. nerves. d. brain.

51. One of the adaptations that helps the animal to protect itself from enemies ....

a. camouflage. b. extinction. c. reproduction.

52. The speed of a car that travels 300 kilometer in 3 hours is .... km/hr.

a. 150 b. 50 c. 100

53. Collisions usually produce ....

a. solar energy. b. sound energy.

c. gravitational potential energy. d. chemical potential energy.

54. In the electric lamp, electrical energy is changed into .... energy.

a. sound b. chemical c. light d. potential

55. The organ responsible for the sight sense is ....

a. the ear. b. the eye. c. the nose. d. the tongue.

56. How can we calculate the speed of an object ? ....

a. Speed = distance + time b. Speed = distance x time

c. Speed = distance + time d. Speed = distance - time

57. When you throw a ball in the air, the gravity will make it move ....

a. upward. b. forward. c. downward. d. backward.

58. The organ which stores solid wastes until it is released outside body is ....

a. stomach. b. small intestine. c. large intestine. d. anus.

✹(2) Complete the following sentences using the words below

1. **(Gills – Eye – decreases – Light)**

1. Fish breathe oxygen gas dissolved in water by..............................
2. The organ that is responsible for sight ....
3. If the speed of object decreases, this means that its kinetic energy ....
4. The form of energy that can be seen is ....

2. **(energy - pushing – hearing- Energy)**

1. Blind people can locate his friend by .... sense.
2. It is the ability to do work and it can change from one form to another is called ....
3. There are two forces that affect on a moving object which are .... and pulling forces
4. .... is the ability to do work.

3. **(Glass - sound - Car seatbelt - Brain)**

1. .... is a safety equipment that is used to prevent car passengers from moving forward when the car stops suddenly.
2. .... is considered an example for transparent materials.
3. .... is an organ in the nervous system.
4. In electric bell, electrical energy changes into .... energy.

4. **(Wood - gills - Eye – Mangrove - mouth)**

1. .... is the organ that we can use to receive light.
2. .... is an opaque object.
3. Fish have .... to breathe.
4. .... tree has long and strong roots to resist water waves
5. Digestion of food starts in the ....

5. **(bats - increases - unbalanced - oxygen)**

1. When the speed of an object increases, its kinetic energy ....
2. Echolocation is used by some animals as ....
3. Any object moves from its place when the forces acting on it are ....
4. Fish breathe .... gas which dissolved in water.

✹(3) Complete the following:

1. Engineers use .... to slow down the motion of the Shockwave truck.
2. The speed affects the .... energy of a moving object.
3. In the electric bell, ... energy changes into .... energy.
4. The sight sense can be performed through .... and ....
5. When two cars move on the same road, car (A) moves at speed equals 10 m/sec., and car (B) moves at speed equals 20 m/sec, this means that car .... moves longer distance than car .... in the same time.
6. Humans, amphibians and reptiles have .... to breath oxygen gas in air.
7. Among safety equipment used during collision of cars are .... and ....
8. When you push a table on the floor, the .... transfers from your body to the table.
9. Most of .... energy in the Newton's cradle is transferred from the first ball to the rest of balls.
10. To increase the .... energy of any moving object we must increase its speed
11. Fireflies use the sense of .... to communicate with each other.
12. .... and .... are from sharp senses in owls.
13. In electric heater, ... energy changes into .... energy.
14. A ball at the top of a hill stores .... energy.
15. The force that causes falling objects toward the Earth is .... force
16. When the fuel runs out, the car decreases it's speed due to .... force.
17. When the mass of an object increases, so its kinetic energy ....
18. The long ears of the fennec fox are example of .... adaptation.
19. The energy that is stored in an object is called .... energy.
20. Humpback whales communicate with each other with their .... senses
21. .... is the ability to do work.
22. By increasing the speed of an object, its kinetic energy ....

(4) Put (√) or (X) :

1. Seatbelt is one of safety equipment in cars.	( )
2. The ears of arctic fox are longer than those of fennec fox.	( )
3. Exhaled air carries oxygen.	( )
4. Gravity pulls objects downward.	( )
5. From the examples of kinetic energy, the bird which stays in its nest.	( )
6. We can determine the sound pitch by smelling sense.	( )
7. The moon is a source of light, as it reflects sunlight.	( )
8. The stopping object can't move until a force acts on it.	( )
9. Whales can communicate with each other by using songs.	( )
10. Gravity is the force that pulls objects downward to the Earth.	( )
11. Digestion process begins in stomach with the help of saliva.	( )
12. Kilogram is the measuring unit of speed.	( )
13. Bats use their sense of smell to avoid dangers.	( )
14. The brain is responsible for processing information.	( )
15. Energy can be changed from one form to another.	( )
16. Gravity force is an upward pulling force.	( )
17. Speaking, writing are ways to communicate with people.	( )
18. Hitting a tennis ball needs a pulling force.	( )
19. The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec.	( )
20. In the electric fan, the electrical energy changes into kinetic energy.	( )
21. The fennec fox has short ear.	( )
22. Potential energy is the energy of moving body.	( )
23. Light travels in straight lines.	( )
24. When a car crashes into a wall, it will not stop.	( )
25. We eat food to obtain energy.	( )
26. Amphibians include frogs and salamanders.	( )
27. Black bears have dark fur to hide among trees	( )

28. Both human and animal need light to see.	( )
29. Respiratory system is the system responsible for entering air to the body.	( )
30. Speed is the physical quantity measured by kilogram.	( )
31. Objects fall down to the Earth due to friction force.	( )
32. Wood is a transparent object that allows light to pass through it.	( )
33. Some animals can see clearly at night.	( )
34. Exhaled air carries carbon dioxide.	( )
35. We can see the movement of electricity through a wire.	( )
36. Thick white fur is an adaptation in bears that live in polar regions.	( )
37. As the height of an object from the Earth's surface increases, its potential energy decreases.	( )
38. The force that attracts objects down to the Earth is called pushing force.	( )
39. Unbalanced forces cause a change in the object position.	( )
40. Thermal energy is an example of kinetic energy.	( )
41. We can measure the covered distance in kilometer unit.	( )
42. Dolphins have strong sight sense.	( )
43. Airbag absorbs the energy of the passengers during collision.	( )
44. When a pen falls down from your hand, the acting force is the gravity.	( )
45. Some animals have extra abilities that humans do not have, and these extra abilities are called super sensory adaptations	( )
46. Cats have excellent night vision, while humans are not.	( )
47. The main difference between pulling and pushing forces is direction of the force.	( )
48. Sharp spines are examples of adaptation of some plants to prevent animals from eating them.	( )
49. As height of an object from Earth's surface increases, its potential energy increases.	( )
50. At night, cat's eyes look like small lighted lamps.	( )
51. The sandy-colored fur of caracal helps it blend in with snow in polar environment.	( )
52. After car collision, the airbags deflate as fast as they inflate.	( )

53. Unbalanced forces keep an object in its place without moving. ( )

54. In penguin's feet, the cold blood vessels can warm up the warm blood vessels. ( )

55. The moon is not considered as a light source. ( )

56. Being exposed to air rich in dust for a long time harms human respiratory system. ( )

57. When an object moves faster, it gains larger amount of kinetic energy. ( )

58. Some animals prefer hunting during the night than hunting during the day. ( )

59. The object that travels down a ramp is affected by the force of gravity. ( )

60. As human needs clean water to drink, fish needs clean air to breathe. ( )

61. Seatbelt is one of the safety equipment in cars. ( )

62. Animals communicate with each other by using different senses. ( )

63. The desert lizard blend in with large green trees, to hide from its enemies. ( )

64. If two objects cover the same distance in same time, so they have the same speed. ( )

✹(5) Correct the underline :

1	Exhausts from factories and **floods** produce smog, that causes air pollution.	(………………………)
2	The energy that is produced due to the friction between the string and other parts of Newton's cradle, is the **sound energy**.	(………………………)
3	The friction between the car's **windows** and the road decreases the speed of the car.	(………………………)
4	When you turn on a radio, the electrical energy changes into **light** energy.	(………………………)
5	**Potential energy** depends on the speed of an object.	(………………………)
6	The system that works with the eyes of living organisms for seeing objects is the **digestive system.**	(………………………)
7	As the mass of a car increases, the damage that occurs during its collision **decreases**.	(………………………)
8	**Air** enters the mouth of fish and then passes across its gills.	(………………………)
9	The sense of eyesight of owls is **weaker** than that in bats.	(………………………)
10	Groups of ants within a colony have **similar** roles.	(………………………)
11	**Stomach** is the main control center in the human body.	(………………………)
12	The **balanced** forces cause the object to move.	(………………………)
13	**Moon** is considered as a source of light.	(………………………)
14	The system that breaks down food into a simpler form is **the respiratory** system.	(………………………)

✹(6) Matching:

1

A	B
1. Kapok	**a.** is the covered distance in a unit of time.
2. Jerboa	**b.** is the stored energy in the object due to its position.
3. Potential energy	**c.** it hops in zigzag path.
4. Speed	**d.** grow in amazon rainforest.

1- **2-** **3-** **4-**

2

A	B
1. Diaphragm	**a.** gravity force.
2. Kinetic energy	**b.** has a role in respiration
3. Force that attracts bodies toward the Earth	**c.** airbag.
4. From safety equipment in cars	**d.** it can be transformed into potential energy.

1- **2-** **3-** **4-**

3

A	B
1. Its body is covered with thick fur	**a.** food.
2. It makes the food soft	**b.** polar bear.
3. Human needs energy from	**c.** owl.
4. has a bowl shaped face	**d.** saliva.

1- **2-** **3-** **4-**

4

A	B
1. Water lily	**a.** its habitat is salt water.
2. Kapok tree	**b.** its habitat is fresh water.
3. Pine tree	**c.** its habitat is Amazon rainforest
4. Mangrove tree	**d.** its habitat is snow

1- **2-** **3-** **4-**

✹(7) Give reason :

1. Seatbelts in cars are very important

   ....

2. Some animals have the ability to make camouflage adaptation.

   ....

3. Kapok tree has hand-shaped leaves

   ....

4. Wood is considered as an opaque material.

   ....

5. Some desert lizards have colorful scales

   ....

6. Fennec fox has a tan-colored coat

   ....

7. Water lilies have wide floating leaves

   ....

8. Barbary fig has sharp spines

   ....

9. Dolphins can hear all kinds of sound

   ....

10. The brain has an important function in the nervous system

    ....

11. Candle is considered as a source of light

    ....

12. You can see an object placed behind a glass cup

    ....

13. A mirror can reflect light better than a painted surface

    ....

14. The fishing cat's eyes seem to glow in the dark

    ....

✹(8) What happens to ... ?

1. If panther chameleon is exposed to danger

....

2. If the acacia leaves are not guarded by sharp spines.

....

3. If the diaphragm moves downward during inhalation

....

4. If the diaphragm moves upward during exhalation.

....

5. If water pollution increases (for humans and fish).

....

6. If bats lose the ability to hear by using echolocation property.

....

7. You place a wood sheet between a light source and a wall.

....

8. The mirror-like membrane in the fishing cat's eyes is not present.

....

9. Light falls on a transparent body such as a glass window

....

10. Light falls on a rough surface

....

11. The Shockwave driver opens the parachutes

....

12. A car runs out of fuel on a flat road

....

13. A car and a truck are affected by the same pushing force

....

✸ (9) Write the scientific term :

1) It delivers messages between the spinal cord and different body organs. (..............................)

2) It is the force that is exerted when objects rub against each other (..............................)

3) A group of ants which is responsible for sending smelly messages when there is a shortage of food. (..............................)

4) It is the force that pulls objects toward the center of the Earth (..............................)

5) structure that prevents the loss of water in the pine tree (..............................)

6) They include the eyes, nose, ears, tongue and skin, and they receive information from the surroundings and send it to the brain. (..............................)

7) They are present in car airbags and allow them to deflate fast after collision. (..............................)

8) A type of surface that reflects light in different directions when the light falls on it. (..............................)

9) A large muscle that contracts during breathing in and relaxes during breathing out. (..............................)

10) A property that helps animals blend in with their surrounding environment. (..............................)

11) A system that works inside the human body to keep the human away from danger. (..............................)

12) The energy that is used to operate television. (..............................)

13) The force that makes an object move a distance. (..............................)

14) An organ in the human digestive system that has tiny blood vessels to absorb the nutrients through its walls. (..............................)

15) A feature in the bull shark, in which the upper surface of its body is darker than its lower surface. (..............................)

16) A type of foxes that has sandy-colored fur to adapt its desert environment. (..............................)

17)	It is the force that pulls objects toward the center of the Earth	(..............................)
18)	Safety equipment used to provide soft cushion, when it is inflated automatically with a gas during collision of cars.	(..............................)
19)	A plant lives in saltwater habitat and has long, strong roots to resist the water waves	(..............................)
20)	The organ used to differentiate between the taste of different types of food	(..............................)
21)	The ability to do work or cause a change.	(..............................)
22)	A process through which the body gets oxygen from the air and expels out carbon dioxide.	(..............................)
23)	The energy of an object due to its motion.	(..............................)
24)	The energy that is stored in food and batteries.	(..............................)
25)	One of the safety equipment in the car.	(..............................)
26)	It is the visible form of energy.	(..............................)
27)	It is a type of force that makes objects move away from you.	(..............................)
28)	It is a tree that is found in snow and has a triangle shape.	(..............................)
29)	The objects which allow light to pass through them.	(..............................)
30)	A reptile that its body is covered by colored scales and has V-shaped feet.	(..............................)
31)	A body that appears lighted in the sky at night, but it is not considered as a source of light.	(..............................)
32)	The organ responsible for processing information transmitted to it, then send messages to the sensory organs.	(..............................)
33)	Ants send a smelly message to alert the ants where to find the food.	(..............................)

34) **Time taken by organism to respond to different information** (....................................)

35) **A form of energy that the object has due to its movement.** (....................................)

36) **A heavy steel ball swings on a cable used in buildings destruction.** (....................................)

37) **It covers the body of some bears to keep warm and blend in snow.** (....................................)

✹ (10) Problems:

1. Find the speed of a runner, if you know that he covers 300 meters in 30 seconds.

....

....

....

2. Classify the following materials into opaque objects and transparent objects

"Wood -Air - Water - Metal - Lenses"

....

....

....

3. A truck travels a distance of 160 kilometers in 2 hours. Find its speed.

....

....

....

4. Find the speed of a car that moves a distance of 240 Kilometers in 3 hours

....

....

....

5. Classify the following living organisms according to their habitats into organisms live in deserts and organisms live in forests in the table below:

(Starred agama lizard - Panther chameleon - Fennec fox - Kapok tree - Palm tree - Barbary fig plant).

....

....

....

6. A deer runs a distance of 200 meters in 5 seconds. Calculate its speed

....

....

....

7. Amir rides his bike and covers a distance of 150 meters in 5 seconds.

Calculate the speed of the bike.

....

....

....

8. Find the speed of a horse, if you know that it covers 250 meters in 5 seconds

....

....

....

9. A train travels from Cairo to Alexandria for a distance of 220 km in 2 hours. Find its speed.

....

....

....

10. Find the speed of a runner, if you know that he covers 400 meters in 20 seconds

....

....

....

Model Answer

(1) Choose the right answer:

1. C	11. B	21. B	31. A	41. A	51. A
2. D	12. A	22. D	32. B	42. A	52. C
3. C	13. B	23. C	33. A	43. A	53. B
4. C	14. B	24. C	34. B	44. B	54. C
5. A	15. A	25. A	35. C	45. D	55. B
6. B	16. B	26. D	36. A	46. B	56. A
7. B	17. C	27. C	37. B	47. B	57. C
8. C	18. D	28. C	38. C	48. A	58. C
9. A	19. B	29. A	39. C	49. A	
10. D	20. B	30. C	40. A	50. B	

(2) Complete the following sentences using the words below

1.

1.gills **2. eye** **3. decrease** **4. light**

2.

1. hearing **2. energy** **3. pushing** **4. energy**

3.

1. car seatbelt **2. glass** **3. brain** **4. sound**

4.

1. eye **2.wood** **3. gills** **4. Mangrove** **5. mouth**

5.

1. increase **2. bats** **3. unbalanced** **4. oxygen**

(3) Complete the following:

1. Parachute	**9.** Kinetic	**17.** Increasing
2. Kinetic	**10.** Kinetic	**18.** Structural
3. Electric – sound	**11.** Sight	**19.** Potential
4. Eyes – brain	**12.** Sight – hearing	**20.** Hearing
5. B – A	**13.** Electric – thermal	**21.** Energy
6. Lungs	**14.** Potential	**22.** Increase
7. Airbags – seatbelts	**15.** Gravity	
8. Energy	**16.** Friction	

(4) Put (√) or (X) :

1. (√)	12. (X)	23. (√)	34. (√)	45. (√)	56. (√)
2. (X)	13. (X)	24. (X)	35. (X)	46. (√)	57. (√)
3. (X)	14. (√)	25. (√)	36. (√)	47. (√)	58. (√)
4. (√)	15. (√)	26. (√)	37. (X)	48. (√)	59. (√)
5. (X)	16. (X)	27. (√)	38. (X)	49. (√)	60. (X)
6. (X)	17. (√)	28. (√)	39. (√)	50. (√)	61. (√)
7. (X)	18. (X)	29. (√)	40. (√)	51. (X)	62. (√)
8. (√)	19. (X)	30. (X)	41. (√)	52. (√)	63. (X)
9. (√)	20. (√)	31. (X)	42. (X)	53. (X)	64. (√)
10. (√)	21. (X)	32. (X)	43. (√)	54. (X)	
11. (X)	22. (X)	33. (√)	44. (√)	55. (√)	

(5) Correct the underline :

1. Cars
2. Thermal energy
3. Tires
4. Sound
5. kinetic energy
6. nervous system
7. increases
8. water
9. stronger
10. different
11. brain
12. unbalanced
13. sun
14. digestive system

(6) Matching:

1.

1. d **2. c** **3. b** **4. a**

2.

1. b **2. d** **3. a** **4. c**

3.

1. b **2. d** **3. a** **4. c**

4.

1. b **2. c** **3. d** **4. a**

(7) Give reason:

1. Because the seatbelts are used in cars to keep the driver's body from moving forward when the car stops suddenly.
2. Because camouflage helps some animals hide from their predators or preys in different environments.
3. To allow wind to move more gently through the leaves without tearing them.
4. Because it doesn't allow light to pass through it
5. To hide among the colorful rocks in the desert.
6. To hide in a sandy, rocky environment and to protect it from the hot Sun.
7. To absorb a large amount of sunlight.
8. To prevent animals from eating its fruits and leaves
9. Because they have sharp senses of hearing, so they can hear all kinds of sound.
10. Because it is the main control center of the body.
11. Because it gives off its own light.
12. Because the glass cup is a transparent material
13. Because the mirror is more smooth than the painted surface.
14. Because it has a mirror-like membrane at the back of its eyes which bounces off the light.

(8) What happens to ... ?

1. It puffs up its body with air, opens its mouth wide and changes the color of its scales.
2. Animals can eat these leaves easily.
3. The size of chest increases, the air rich in oxygen gas enters the lungs.
4. The size of chest decreases, the air rich in carbon dioxide gas comes out of the lungs.
5. Humans cannot get clean water to drink and fish cannot get clean water to breathe.
6. They cannot hunt at night.
7. The shadow of the wood sheet is formed
8. It cannot see clearly and hunt at night.
9. Light passes through the glass window
10. Light rays are reflected in different directions.
11. The Shockwave truck starts to stop gradually
12. Its speed decreases gradually until it stops.
13. The car travels a distance longer than the truck.

(9) Write the scientific term:

1. Nerves
2. Friction force
3. Nurse ants
4. Gravity
5. Needle leaves
6. Sense organs
7. Holes
8. Rough surface
9. Diaphragm
10. Camouflage
11. Nervous system
12. Electrical energy
13. Work
14. Small intestine
15. Counter shading
16. Fennec fox
17. Gravity
18. Air bag
19. Mangrove tree
20. Tongue
21. Energy
22. Respiration process
23. Kinetic energy
24. Chemical potential energy
25. Seatbelt or airbag
26. Light energy
27. Pushing force
28. Pine tree
29. Transparent objects
30. Panther chameleon
31. Moon
32. Brain
33. Nurse ants
34. Reaction time
35. Kinetic energy
36. Wrecking ball
37. White fur

(10) Problems:

1 $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{300}{30} = 10\ m/s$	**6** $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{200}{5} = 40\ m/s$
2 Opaque objects: wood - metal Transparent object: air – water - lenses	**7** $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{150}{5} = 30\ m/s$
3 $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{160}{2} = 80\ km/h$	**8** $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{250}{5} = 50\ m/s$
4 $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{240}{3} = 80\ km/h$	**9** $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{220}{2} = 110\ km/h$
5 Desert : Starred agama lizard - Fennec fox Palm tree - Barbary fig plant Forest : Panther chameleon - Kapok tree	**10** $\text{Speed} = \frac{\text{distance}}{\text{time}} = \frac{400}{20} = 20\ m/s$

مجانا وحصريا

حمل الآن

المراجعة رقم (4)

الترم الاول





Q1 Give reason

1) The starred agama lizard always looking for shade areas in desert
   To keep its body cool during hot days
2) The penguin's body has a thick layer of fat and dense feathers
   To keep its body warm
3) The blood vessels in the penguin's feet weave around each other
   To keep its toes from freezing as the warm blood vessels heat up the cold blood vessels
4) Some desert lizards have colorful scales
   To hide among the colorful rocks in the desert
5) Fennec fox has sandy/tan colored fur, while polar bear has a white fur
   So, the fennec fox can hide in the sand while the polar bear can blend in with snow
6) Some animals have the ability to make camouflage adaptation
   To hide from their predators or prey in different environments
7) Fennec fox undergoes panting
   To cool its body
8) Arctic fox has a thick fur coat
   To keep its body warm in extreme cold weather
9) The fur of the Arctic fox is white in winter and brown in summer
   To sneak up on its prey in any season
10) Burrow is an excellent place for arctic and fennec foxes
   For Fennec fox to stay cool during sunny days while Arctic fox to stay warm at night

11) Fennec fox has extra-large ears, while arctic fox has short ears
To help Fennec fox to lose heat and cool its body while arctic fox to stay warm
12) Bull sharks have less competition for finding food on fresh water
Because other types of sharks live in salt water only
13) panther chameleon has V shaped feet and a long tail
To hold tightly the branches of trees
14) Branches of acacia tree gather on the top of its trunk
To prevent animals from reaching their leaves and eating it
15) Acacia tree has sharp spines around its leaves
To prevent animals from eating their leaves
16) wind is important to acacia tree
To send smelly messages to nearby acacia tree to start making poison if there is danger
17) kapok tree has hand shaped leaves
To allow wind to move gently through the leaves without tearing them
18) kapok trees stay firmly rooted in the soggy soil although they are very tall
Because of the large wide roots called buttress roots that hold the trunk in the soggy soil
19) pine tree has a triangular shape and short branches
To allow the snow to slide easily over it so the branches do not break
20) water lilies have wide floating leaves
To absorb a large amount of sunlight
21) mangrove trees have long and strong roots
To resist the water waves
22) palm trees have thick roots and small leaves
To resist the strong winds

23) Barbary fig has sharp spines
To prevent animals from eating its fruits and leaves
24) the human body is made up of different systems
To perform different functions
25) the importance of juices of liver and pancreas
to help in breaking down food into nutrients
26) Anus is an important organ in the digestive system
Because solid wastes can leave the body through it
27) the inhaled air differs from the exhaled air
Because the inhaled air is rich in oxygen gas while the exhaled air is rich in carbon dioxide gas
28) diaphragm plays an important role in respiration process
Because it contracts and moves downward during inhalation to increase the size of chest while it relaxes and moves upward during exhalation to decrease the size of the chest
29) Gills are unique structural adaptation in fish
Because they enable fish to breathe oxygen underwater
30) cars and factories exhaust cause breathing problems
Because they produce smog which causes damage to the lungs, asthma, and heart diseases
31) sometimes people in big cities are forced to change their lifestyles
To decrease air pollution
32) Skin of fish is different from that of frog, although both of them live in water
Because frog's skin can absorb oxygen gas from water while fish cannot
33) Dry season is very harmful for amphibians
Because their skin must be wet all the time to extract oxygen gas from water

34) Pollution of air and water can affect the survival of amphibians
Because they breathe oxygen gas from water and air
35) Scientists must study how amphibians interact with their environments
To help them survive
36) The Egyptian mongoose make sounds
To communicate with other mongoose to move from one place to another or when searching for food
37) Owls can hunt during the night
Because they have extraordinary senses of hearing and sight to hunt at night
38) Dogs are used in guarding
Because they have sharp senses of hearing and smell
39) Dolphins can hear all kinds of sounds
Because they have sharp senses of hearing
40) Animals that live in hot regions become active at night
To hunt in cool weather
41) Owls have bowl shaped faces
To detect the location of their preys through picking up sounds around them
42) Bats can catch insects in the dark
Because they depend on echolocation to find insects at night
43) Owl is a nocturnal animal
Because it becomes active at night
44) The Egyptian Jerboa can jump for long distances
Because it has long hind legs to jump for long distances
45) The presence of hair on the Egyptian Jerboa's feet and toes
To help it catch the sand when it jumps

46) The Egyptian Jerboa's ears play a very important role in its survival
Because it has large and sensitive ears that detect even a quiet snake

47) Humans can recognize the sounds of different musical instruments
Because ears receive the different sounds and transmit them to the brain to be processed and determine the type of musical instrument

48) The brain has an important function in the nervous system
Because it is the main control center of the body

49) The songs of humpback whales have high pitched sounds during winter months
Because high pitched sounds travel better through cold water

50) Humpback whales sing different songs
TO communicate with each other in different seasons

51) the nurse ants send smelly messages to scout ants
To alert the scout ants that the food is low

52) the soldier ants use smells in their communication
To communicate with the other ants in case of danger

53) The echo that is picked up by the special cane of blind people is turned into vibrations
To tell the blind person where objects are around him

54) The blind people cannot hear the sound that emits from their special canes
Because their special canes emit a high-pitched sound that human's ears cannot hear

55) The fishing cat eyes seem to glow in the dark
Because it has a mirror like membrane on the back of its eyes which bounces off light

56) Candle is considered as a source of light
Because it gives off their own light





57) We can see the moon shining at night although it is not a source of light

Because it does not give off their own light, but it reflects light

58) Nocturnal animals can see better than humans at night
Because they have bigger eyes and wider pupils which are more sensitive to light than human

59) Shadow of an opaque body is formed when light falls on it
Because the opaque body does not allow light to pass through

60) you can see an object placed behind a glass cup

Because transparent materials allow light to pass through

61) A mirror can reflect light better than a painted surface

Because the mirror is more smooth than the painted surface

62) Humans receive and send information through speaking, writing, and reading

To communicate with each other

63) Fireflies use different patterns of flashlight to communicate with each other

To warn off their predators or attract a mate

64) Fireflies produce a chemical reaction inside their bodies

To light up their bodies and communicate with each other

65) The symbols that are used in writing have a specific pattern
To give a specific meaning according to the arrangement of letters in a word





66) We use the expressions on faces during talking with each other

To help people predict our feelings

67) The shockwave truck is faster than the normal truck

Because it has three jet engines

68) Engineers use parachutes in the shockwave truck designs

To stop the shockwave truck

69) By increasing the number of fire extinguishers, the distance that the cart moves will increase

Because by increasing the number of fire extinguishers, the speed of the cart will increase

70) When you kick a ball laying on the ground, it moves

Because of the pushing force of your leg on it

71) When two equal pushing forces act on an object in opposite directions, the object does not move

Because the two forces are balanced so the object doesn't move

72) If you let a pen out of your hand, it falls to the ground

Because of the pulling force of gravity down toward the Earth

73) When your friend catches a ball that is thrown in the air, the motion of the ball is stopped

Because of the pushing force of his hand

74) When your toy car crashes into a wall, it will stop moving

Because the wall applied a force to the car equal to the force of the car moving towards the wall and in opposite direction

75) When you stop pedaling during the movement of your bicycle, it slows down until it stops
Because of the friction force between the bicycle tires and the road

76) If you push two similar toy cars on the same ground, one of them may travel for a longer distance than the other
Because you applied two different forces on them

77) If the same force acts on a small car and a truck, the smaller car will travel for a longer distance than the truck
Because the smaller object travels faster than the bigger object when applying the same force

78) The roller coaster doesn't need electricity during the movement down the hill
Because the stored potential energy changes to kinetic energy

79) The speed of the roller coaster increases as it moves down the hill
Because its kinetic energy increases

80) The goal net vibrates when a ball hits it
Because the kinetic energy of the ball transfers to the goal net

81) A bird stops on a tree has energy
Because it is found at a height from the Earth, so it has potential energy

82) When a stone is thrown upwards, its potential energy increases
Because its height from the Earth increases

83) Electric lamp produces different forms of energy
Because it produces light and thermal energies

84) On filling the spring of a toy car, then let it free, the car moves
Because the potential energy in the spring changes to kinetic energy

85) A sand surfer moves very fast down the sand slope
Because his stored potential energy changes to kinetic energy

86) The stored potential energy in a battery differs from that of a ball at the top of a hill

Because the battery stores chemical potential energy while a ball at the top of hill stores gravitational potential energy

87) We cannot live without eating food

Because burning of food produces kinetic energy to do different activities

88) The speed of the ball increases when the bat hits it hard

Because the kinetic energy of the bat transfers to the ball

89) Seatbelts in cars are very important

Because they keep the driver's body and passengers from moving forward when the car stops suddenly

90) Airbags in cars are very important

Because they slow down the speed of the driver moving forward and absorb the energy of the car due to its collision

91) When two objects collide with each other, you can hear a sound

Because part of the kinetic energy changes into sound energy

92) Driving fast is very dangerous

Because increasing speed increases the kinetic energy that results in exerting a large force during accidents

93) A truck needs a bigger engine than that of a small car to move with the same speed

Because the truck has more mass than the car

94) A car consumes less fuel than that consumed in a bus to move at the same speed

Because the car has a smaller engine than the bus

95) A moving truck has kinetic energy more than that of a small moving car at the same speed
Because the truck has a bigger mass than the small car

96) A car with mass= 3 tons moves down a hill reaches its bottom faster than another car with mass =1 ton moves down the same hill
Because it has speed and kinetic energy more than that of the car with 1 ton mass

97) The speed of a truck is more than that of a car when both of them move down a ramp
Because the mass of the truck is more than the car

98) You can hear a sound during collision between marbles
Because some of the kinetic energy changes into sound energy during collision

99) The amount of energy before collision is equal to the amount of energy after collision
Because the energy is conserved during the collision

Q2 What happens if

1) The warm blood vessels and cold blood vessels in the penguins' feet do not weave around each other
Penguins' toes will freeze

2) The polar bear has thin fur instead of thick fur
It cannot adapt with the cold weather in the polar region, and it will die

3) The body of fennec fox is covered with black fur
It cannot hide in the desert from prey or predators

4) some types of lizards are not able to make camouflage adaptation
They cannot hide from prey or predators

5) Arctic foxes have a brown coat during winter, but it turns white during summer
   It cannot hide from its prey in winter or summer
6) Fennec fox has short ears
   It cannot cool its body
7) Sense of hearing becomes weak in foxes
   They cannot hunt their prey
8) Arctic fox has only a white coat during all seasons of the year
   It cannot sneak up on its prey in the summer
9) Both eyes of panther chameleon move in one direction only
   It cannot hide from its prey and predators
10) Panther chameleon is exposed to danger
   It puffs up its body with air, opens its mouth wide and changes the color of its scales

11) the length of acacia taproot does not exceed three meters downward
   It cannot search for water in the deep soil
12) the acacia leaves are not guarded by sharp spines
   Animals can eat these leaves
13) there are no buttress roots in the kapok tree
   Kapok tree cannot stay firmly in the soggy soil
14) the pine tree has an umbrella shape not a triangular shape
   The snow cannot slide easily over its branches so branches can break down
15) some plants of rainforest habitat became very short
   The sunlight cannot reach these plants easily
16) water lily has narrow leaves instead of wide leaves
   It cannot absorb a large amount of sunlight




17) palm tree has thin roots and large leaves

It cannot resist the strong winds

18) the small intestine is removed from the human body

The digestive system cannot perform its function properly

19) the nutrients absorbed by the walls of small intestine enter the tiny blood vessels

The blood carries these nutrients to all body parts

20) the diaphragm moves downward during inhalation

The size of the chest increases and the air rich in oxygen gas enters the lungs

21) the diaphragm moves upward during exhalation

The size of the chest decreases and the air rich in carbon dioxide gas comes out of the lung

22) human activities and bad habits increase

Air, water, and soil pollution will increase

23) the exhaust from cars and factories increases in big cities

Smog increases causing breathing problems such as damage of lungs, asthma, and heart diseases

24) water pollution increases (for human and fish)

Human cannot find clean water to drink, and fish cannot find clean water to breathe

25) pollution level increases in the natural habitat of amphibians

The number of amphibians will decrease

26) the ecosystem of amphibians contains clean air and water

Amphibians will survive and their number increase

27) Amphibians do not have lungs and breathe only through skin

They can live only underwater

28) the number of predators of amphibians increases

The number of amphibians will decrease





29) salamanders have lungs only to respire
Salamanders can live on land only

30) skin of frogs becomes dry
They cannot survive

31) the sound waves produced by a dolphin hit an object under water
It bounces back to the dolphin in the form of echo so the dolphin can detect the location of the object

32) Bats lose the ability to hear by using echolocation property
They cannot hunt at night

33) Owls cannot turn their heads in all directions
They cannot search for preys everywhere

34) Your hand touches the spines of a barbary fig plant
Your hand will move quickly away

35) The Egyptian Jerboa hears a snake moves towards it
It hops in zigzag path so it can escape quicky

36) The spinal cord became absent from the components of the nervous system
Messages cannot be transmitted between brain and body parts

37) sensory receptors related to the eyes stopped sending messages to the brain
Brain cannot process what the eyes see

38) The hearing sense of humpback whales becomes weak
They cannot communicate by songs using their hearing sense

39) The smell sense of ants becomes weak
They cannot communicate with each other by smelling messages

40) the amount of food in the ant's colony decreases
The nurse ants send a smelly message to the scout ants to alert the ants where to find food




41) there is a danger near an ant's colony

The solider ants send smelly messages to alert the other ants that there is danger

42) High-pitched sound that is produced by the blind person's cane hits an object

It bounces back to the cane in the form of echo which is turned into vibrations

43) bats cannot use echolocation property

They cannot communicate with each other or locating the objects by the sense of hearing

44) There is a wall in front of a blind person who uses his special cane

The cane will make vibrations that tell the blind person that there is a wall in front of him

45) The mirror like membrane in the fishing cats' eyes is damaged

Fishing cat cannot see or hunt at night

46) the moon cannot reflect light

It appears dark and we cannot see it

47) you place an opaque object between a light source and a wall

Light cannot pass through the opaque object to the wall, so shadow of the object is formed on the wall

48) light falls on a transparent body such as a glass window

Light passes through the glass window

49) Light falls on a rough surface according to the direction of the reflected light rays

Light rays are reflected in different directions

50) A person makes flashing pattern by LED lights near to a group of fireflies

The fireflies imitate the flashing pattern that the person made





51) A firefly wants to attract a mate to reproduce

It produces a chemical reaction inside its body to light up and attract a mate

52) The traffic light becomes red while you are going to cross the road

the eyes send a message to the brain to stop walking and not to cross the road

53) You kick a stopped ball on the ground

It moves due to the pushing force

54) Engineers placed jet engines inside a normal truck instead of its normal engine

It turns to shockwave and move much faster

55) The shockwave driver opens the parachutes

It will stop gradually

56) The pulling force of the two teams are equal in the tug of war game

The rope will not move

57) The pulling force of the two teams in tug of war game are not equal

The rope will move towards the team of greater pulling force

58) You let your toy out of your hand

It will fall down due to the pulling force of gravity

59) you push two similar balls with different forces on the ground

The ball that is affected with greater force will move longer distance

60) A car runs out of fuel on a flat road

Its speed decreases gradually until it stops

61) A car and a truck are affected by the same pushing force

The car travels a distance longer than the truck

62) Roller coaster moves down the hill (according to energy)

Its stored potential energy changes into kinetic energy

63) The roller coaster loses it kinetic energy

It will stop





64) If a stopped ball at the top of a ramp starts to move down (according to energy)
Its stored potential energy changes to kinetic energy

65) An object is placed at a height from the Earth's surface (according to potential energy)
The object has potential energy

66) An apple falls from a tree to the ground
The potential energy of the apple changes into kinetic energy

67) You transfer a book from a lower shelf to a higher shelf (according to potential energy)
The potential energy will increase

68) You operate a washing machine (according to the change of energy)
The electrical energy changes into mechanical energy

69) A boy moves down the slide (according to the change of energy)
The potential energy changes into kinetic energy

70) You switch on an electric lamp (according to the change of energy)
The electrical energy changes into light and thermal energies

71) The moving cricket bat hits a ball
The kinetic energy of the bat transfers to the ball

72) Food burns inside the human body
The stored chemical energy of food changes into kinetic energy so human can do activities

73) If you put a battery inside a flashlight, then you switch
The stored chemical energy in the battery changes into light and thermal energies

74) Airbags in a car don't inflate during a crash
The energy of collision pushes the driver forward and harms him

75) The speed of a car increases (according to kinetic energy)
The kinetic energy increases

76) Two bicycles move in an opposite direction, collide with each other
The damage would be more severe
77) The pushing force that acts on an object decreases (according to kinetic energy)
The kinetic energy will decrease
78) The speed of a moving object increases (according to kinetic energy)
The kinetic energy will increase
79) The kinetic energy of a moving car increases (according to the damage of collision)
The damage would be more severe
80) A truck and a small car move at the same speed (according to kinetic energy)
The kinetic energy of the truck is more than the car
81) The mass of a toy car that moves down a ramp increases (according to the time taken to reach the end of ramp)
The time taken will decrease
82) Increasing the angle of inclination of a ramp where a ball moves down it (according to the ball speed)
The speed will increase
83) The newton's cradle ball is raised up without leaving it go (according to its energy)
It stores potential energy
84) You left the ball of newton's cradle move towards the rest of balls (according to the change of energy)
The potential energy changes into kinetic energy
85) Friction occurs between the string and the other parts of newton's cradle during collision (according to the change of energy)
Some of the kinetic energy changes into thermal energy





Question 1: choose the correct answer

1- Adaptation helps living organisms in all of the following Except ....

a) Surviving b) reproduction c) hiding d) death

2- Penguins' feet have blood vessels that bring .... up from feet towards its body

a) Cold water b) warm water c) cold blood d) warm blood

3- Fennec Fox and caracal have .... that help them blend in with the desert

a) Colorful scales b) thick white fur c) sandy colored Fur

4- The panting of fennec fox is considered ....

a) Only structural b) only behavioral c) both of them

5- All the following properties help the arctic fox to stay warm except ....

a) Thick fur coat b) tan colored c) short ears and legs

6- One of the behavioral adaptations of acacia tree is that ....

a) Has one very long root
b) Has sharp spines around its leaves
c) Produce poison to make the leaves taste bad

7- Mangrove trees have long and strong roots to ....

a) Resist the strong wind
b) Resist the water waves
c) Prevent loss of water

8- All the following are organs of the digestive system except ....

a) Mouth b) nose c) stomach d) esophagus

9- Crushing the food in the mouse is the function of ....

a) Stomach b) tongue c) saliva d) teeth

10- The undigested food passes from the small intestine to ....

a) Liver b) pancreas c) large intestine

11- The passage of air during inhalation is ....

a) Throat – nose -lungs -trachea
b) Lungs – nose-trachea -throat
c) Nose-throat-trachea-lungs

12- Both human and fish ....

a) Can breathe in air
b) Can breathe in water
c) Use oxygen gas to breathe
d) Use carbon dioxide gas to breathe

13- The negative effects of human activities on human health are ....

a) Lung damage and asthma
b) Asthma and wounds
c) Heart problems and wounds

14- Animals that become active at night are called

a) Extinct animals
b) Endangered animals
c) Nocturnal animals



15- The root of kapok tree doesn't grow deeply in the soil because................

a) The soil contains less water

b) The soil contains more water

c)The climate is very cold

d)The climate is very hot

16-The system responsible for moving your hand away from danger such as touching a hot cup of tea is the .... system

a) Digestive system

b) Respiratory system

c)Nervous system

d)Stomach

17- Songs of humpback whales in winter are characterized by each of the following except

a) It is for mating season

b) Moving better through cold water

c)Having soft sounds

d)Having low pitched sounds

18- Humans can help restore the ecosystem by all of the following activities except ....

a) Replanting the cleared forests

b) Removing air and water pollutants

c)Producing more factories exhausts

d)Preserving existed plants and animals

19-In penguins' body, the insulting layer of fat and dense feathers trap .... against the skin

a) Cold air

b) Cold water

c)Warm water

d)Warm air

20-.................... is considered as a behavioral adaptation in the panther chameleon

a) Puffing up its body during danger

b) Each eye can move independently

c)V shaped feet

d)Long sticky tongue

21-From the structural adaptation of water lily plant is that ....

a) It has long roots

b) It has sharp spines

c)It has tiny leaves

d)It has wide leaves

22- Bears that live in forests have fur .... that of polar bears

a) Whiter than

b) Darker than

c)Similar to

d)Brighter than

23-All the following properties are considered as structural adaptations in the panther chameleon except ....

a) Each eye can move independently

b) Opening its mouth wide at danger

c)V shaped feet

d)Long sticky tongue





24- Pine tree has a triangular shape to make snow slide over its branches without breaking it. This structural adaptation makes the tree face the extreme cold climate like the feet of ....

a) Caracal

b) Penguin

c)Fennec fox

d)Brown bear

25-Camouflage means that animal ....

a) Can be seen easily among its surroundings

b) Is hard to be seen among its surroundings

c)Is easily to be seen by its preys

d)Can be seen easily by its predators

26-The five senses of humans and animals include

a) Sight-hearing-touch-smell-movement

b) Sight-movement- taste-touch-smell

c)Taste-touch-movement-hearing-smell

d)Sight-hearing-taste-smell-touch

27- Umbrella shaped trees include

a) Mangrove tree and acacia tree

b) Mangrove tree and kapok tree

c)Acacia tree and kapok tree

28-fennec foxes and arctic foxes live in barrows, this belongs to .... adaptation

a) Only structural

b) Only behavioral

c)Both structural and behavioral

d)Neither structural nor behavioral

29-The blind person's cane and .... emit a high-pitched sound that bounces off objects forming an echo

a) Lizards

b) Polar bears

c)Bull sharks

d)Bats

30-The nervous system can do all the following functions except........

a) Gathering information

b) Processing information

c)Sending signals

d)Falling of rains





31-One of the behavioral adaptations that helps the animal to protect itself from enemies

a) Camouflage

b) Extinction

c)Migration

d)Reproduction

32-bats are .... animals

a) nocturnal

b) morning

c)not hearing

d)not flying

33-The roots of palm plants help them to ....

a) Stand strong against the wind

b) Reach the underground water

c)Fixing plants in the soil

d)All the above

34-................. is covering the body of arctic fox

a) Heavy skin

b) thick fur

c)Many feathers

35-................. are panting to lower their body temperature

a) Whales

b) Owls

c)Foxes

d)Bats

36-what happens to the living organisms that cannot adapt to the conditions of their environment

a) Their number increases

b) They can't stay in the environment

c)They keep their number constant

d)They can survive in the environment

37-the system that helps us to translate messages that come from our surroundings such as smells and sound

a) Respiratory

b) Digestive

c)Nervous

d)Circulatory

38-the organ responsible for the sight sense is ....

a) The ear

b) The tongue

c)The nose

d)The eye

39-an animal has the ability to turn its head in all directions is the

a) Snake

b) Jerboa

c)Dolphin

d)Owl

40-all of the following are components of the nervous system except

a) Spinal cord

b) Heart

c)Nerves

d)Brain

41- the nervous system of mammals consists of ....

a) Brain only
b) Spinal cord only
c) Nerves and spinal cord
d) Brain, spinal cord and nerves.

42- owls have all the following properties to sense distant prey except ....

a) Large eyes
b) Bowl shaped face
c) Head turns in all directions
d) Weak sense of hearing

43- if you smell smoke from something burning nearby then you realize you have to move away fast. This mean there is an integration between .... in this situation

a) Digestive and respiratory system
b) Digestive and nervous system
c) Respiratory and nervous system

44- sense organs collect information and send signals to .... for processing and understanding

a) Hands b) legs c) brain d) stomach

45-................... use echolocation by bouncing high bitched sound in air

a) Bats b) dolphins c) whales





46- When you move something toward you, this represents ....

a) Pushing force

b) Pulling force

c) Light energy

d) Sound energy

47- Displaying light is a type of communication that is found in

a) Plants only

b) Plants and humans

c) Animal and humans

d) Animals only

48- all the following are examples of motion except.............

a) A running person

b) A ball traveling through the air

c) A flying bird

d) A sleeping dog





49- Reading and writing are common types of communication in the .... world

a) Humans

b) Animals

c) Birds

d) Plants

50- When an object is in motion, this means that its .... changes

a) Color

b) Shape

c) Size

d) Position

51- If there is nothing to stop the movement of an object, this object will ....

a) Stay in motion

b) Suddenly stop

c) Stop after few minutes

d) Stop after few seconds





52- Push or pull actions are considered as types of ....

a) Force

b) Device

c) Energy

d) Adaptation

53- Animals can communicate with each other through ....

a) Sounds and lights

b) Talking

c) Reading

d) Writing

54- which of the following allows light to pass through it

a) a rock

b) moon

c) fire

d) Glass

55- which of the following is a source of light

a) eye
b) moon
c) fire
d) mirror

56- raising the thumb up or lower it down is a kind of

a) colors
b) codes
c) waves
d) lights

57- when a light falls on a dark surface, ...

a) The surface absorbs the light
b) Light passes through it
c) The light is refracted
d) Nothing happens

58- all the following are examples of pulling force except

a) Kicking a ball
b) Pulling the rope
c) Opening the desk's drawer
d) Lifting up your bag





59- all the following represents the pushing force except

a) Kick a ball

b) Press on electrical switch

c) Close the desk's drawer

d) Lifting up a bag

60- the organ responsible for the sight sense is ....

a) The ear

b) The tongue

c) The nose

d) The eye

61- the force that pulls the objects down toward the center of the Earth is ....

a) Gravity

b) Pushing

c) Water

d) Wind





62- objects need force to move, this force is represented in ....

a) Pushing only

b) Pulling only

c) Pushing and pulling together

d) The Earth gravity only

63- when a ball stands on the ground without moving, the forces acting on it are ....

a) Balanced

b) Un balanced

c) Push it up

d) Not equal

64- from the opaque objects

a) Cartoon

b) Glass

c) air

65- from the organs that we can use to send or receive the code ....

a) Heart

b) Ear

c) Leg





66- which of the following organs can work together for seeing different objects

a) Nose and brain

b) Eyes and brain

c) Ears and brain

67- the eyes of fishing cat glow in the dark because their eyes..........

a) Emit their own light

b) Can reflect light

c) Are small in size

d) Have narrow pupils

68- when light rays hit an object, all the following are correct except

a) Some of the rays are absorbed by the object

b) Some of the rays are bounced off the object

c) Some of the rays may go through the objects

d) All the rays are absorbed by the object

69- all the following are forms of codes except ....

a) Thumb up and down

b) Face expressions

c) Writing

d) Swimming

70- When you sit on a chair, the force of gravity is .... and holding you in the chair

a) Pulling you upward

b) Pulling you downward

c) Pushing you upward

d) Pushing you downward

71- The force that occurs when an object rubs against another object is called

a) Friction

b) Gravity

c) Push

d) Pull

72- When an object moves down a ramp, its stored potential energy ....

a) Increases

b) Does not change

c) Changes to less active form of energy

d) Changes to a more active form of energy

73- The energy that is stored in an object due to its position is ....

a) Kinetic
b) Potential
c) Electrical
d) Chemical

74- The potential energy of an object depends on ....

a) Its mass only
b) Its height from the earth surface
c) Its mass and height from Earth surfaces
d) Its temperature

75- All types of energy can be classified into two main groups which are.............

a) Light energy and sound energy
b) Chemical energy and electrical energy
c) Potential energy and kinetic energy
d) Magnetic energy and thermal energy

76- Chemical energy can be stored in ....

a) Food only
b) Battery only
c) Television and food
d) Food and battery

77- How can we calculate the speed of an object?

a) Speed= distance/time
b) Speed= distance* time
c) Speed= distance + time
d) Speed= distance-time

78- Which of the following is a measuring unit of speed

a) Hr./km
b) Sec/m
c) Kg/sec
d) m/sec

79- what is the speed of a car that travels 400 meters in 4 seconds

a) 100 m/sec
b) 20 m/sec
c) 30 m/sec
d) 40 m/sec

80- When the kinetic energy of a moving body ...., its speed ....

a) Increases-does not change
b) Increases-increases
c) Decreases-does not change

81- a horse is faster than a human, as the human covers a ....distance at the same time

a) Less
b) Greater
c) Double
d) Twice

82- a very big truck needs .... to move

a) Very small engine
b) Small engine
c) Very big engine
d) No engine





83- Which of the following sentences describe the friction force

a) It pulls objects toward the ground
b) It pushes objects away from the ground
c) It slows down or stops the moving objects
d) It doesn't affect the moving objects

Question 2: put true or false

1) Digestion process begins in stomach with the help of saliva ( )
2) Living organisms can adapt their environment conditions through structural adaptation and behavioral adaptation ( )
3) Food passes from mouth to stomach through a narrow tube called small intestine ( )
4) The Egyptian Jerboa can jump long distances depending on its long hind legs ( )
5) The behavioral adaptation is a change in the body structure of a living organism to survive ( )
6) Sharp spines are adaptation of different plants to prevent animals from eating them ( )
7) During exhalation, the diaphragm expands ( )
8) The sandy colored fur of caracal helps it blend in with snow in polar environment ( )
9) The inhaled air is rich in carbon dioxide while the exhaled air is rich in oxygen ( )




10) In penguin's feet, the cold blood vessels can warm up the warm blood vessels (   )
11) Camouflage helps animals adapt the extreme weather conditions in their ecosystem (   )
12) Amphibians includes frogs and salamanders (   )
13) Some animals prefer hunting during the night than hunting during the day (   )
14) Eyes are one of the five senses, on which humans and animals depend on to see the surroundings (   )
15) As human needs clean water to drink, fish needs clean air to breathe (   )
16) The desert lizard blend in with large green trees, to hide from its enemies (   )
17) Humpback whales produce more than one type of songs ( )
18) Exhaled air carries oxygen (   )
19) Hand shaped leaves of kapok tree is considered behavioral adaptation ( )
20) A person can identify spoiled food through the touch sense (   )
21) The migration of birds to search for food is behavioral adaptation ( )
22) The skin is the sensory organ that makes you feel the smoothness of the cloth ( )
23) The respiratory system is responsible for the entry of air into the body ( )
24) Dolphins have strong sight sense ()

25) Some animals can see at night ( )
26) Bats can use their sense of smell to avoid danger ( )
27) The ears are the sense organ which is responsible to see objects ( )
28) The human digestive system breaks down food into nutrients ( )
29) Foxes have strong hearing sense (   )
30) Food turns from complex to simple during the digestion process ()
31) The food passes through the large intestine before it goes to small intestine ( )
32) The ears or arctic fox are larger than of those of fennec fox ( )
33) All types of sharks live in fresh water
34) Sending bad smells by acacia tree is a behavioral adaptation (   )
35) Acacia has long wide roots called buttress roots (   )
36) The brain is responsible for processing information (   )
37) Cats have excellent night vision while snakes and bats are not (   )
38) The main difference between pulling and pushing forces is the direction of the force (   )
39) At night, cats' eyes look like small lighted lamps (   )
40) Unbalanced forces keep an object in its place without moving (   )
41) When a car crashes into a wall, it will not stop (   )





42) When a car runs out of fuel on a flat road, its speed increases gradually until it stops
43) The moon is considered as a light source (   )
44) in a complete dark room, you can use the sense of touching, tasting, smelling, and hearing only (   )
45) Wood is a transparent object that allows light to pass through it ( )
46) The seesaw moves up and down because the forces acting on it are unbalances (   )
47) Some animals can see at night (   )
48) When the position of a body changes according to a fixed point, the body moves (   )
49) Light travels in straight lines (   )
50) Red and green traffic lights are considered codes (   )
51) Gravity pulls objects towards the center of the Earth (   )
52) The brain is responsible for processing information (   )
53) Both humans and animal don't need a source of light to see (   )
54) Speaking is the only way to communicate with people (   )
55) Hitting tennis ball needs a pulling force (   )
56) The moving object only have energy, while the objects that don't move have no energy (   )
57) As the height of an object from the Earth's increase, its potential energy increases
58) Any moving object has a form of energy known as kinetic energy (   )

59) We can measure the distance in kilometer unit (   )
60) The chemical energy in batteries can be converted into electrical energy ( )
61) In the electric fan, the kinetic energy is converted into electrical energy ( )
62) When the roller coaster slides down fast, its kinetic energy increases ( )
63) The force that slows down or decrease the speed of an object is gravity ( )
64) If two objects cover the same distance in the same time, so they have the same speed ( )
65) After collision, the airbags deflate as fast as they inflate ( )
66) The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec ( )

Question 3: What happens if

1) The diaphragm moves down during inhalation while it moves up during exhalation
2) The length of acacia taproot doesn't exceed 3 meters downward
3) The amount of food in the ant's colony decreases
4) Bats cannot use echolocation property
5) Light falls on a mirror that has few cracks
6) You are standing on the ground, and you let a ball out of your hand
7) The mirror like membrane of a fishing cat is not present
8) Light falls on a transparent body such as a glass window



9) A firefly wants to attract a mate
10) Speed of a car increases (according to kinetic energy)
11) Friction occurs between the string and the other parts of newton's cradle during collision (according to the change of energy)

Question 4: complete the following sentences

1) As the pollution rate of water in ponds and air increases, the number of amphibians ....
2) The hand shaped leaves of kapok tree allow .... to flow through them gently
3) The leaves of water lilies are wider in order to .... on the water surface and to absorb a large amount of ....
4) The .... is the organ that sends information to the brain when you smell the odor of a perfume
5) During swallowing, the food passes from the throat to the .... then to the .... inside your digestive system
6) During inhalation, air travels down from your throat to your lungs through ....
7) On hearing an alarm ring, the sensory receptors that are found in the .... send a message through a network of nerves to the .... which determines what to do to avoid danger
8) When you touch a very hot object, your hands move quickly away, this action is called ....

9) Among animals that can live in polar environment are .... and ....

10) Echolocation is a type of communication that depends on the sense of .... and it is used by some animals such as .... and ....

11) Humans, amphibians, and reptiles have .... to breath oxygen gas in air

12) Owls can detect prey by using the sharp senses of .... and ....

13) During exhalation .... gas comes out of the lung

14) Fish have .... to breathe under water while frogs use their .... to breath in water

15) The spinal cord is an important organ of the .... system

16) The eye sends messages to .... through the nerves

17) Bats use .... as a mean of communication with each other

18) A tube with muscles that help to push food into the stomach is called ....

19) Air enters the human body through .... system

20) The different languages are considered as ....

21) The eye sends messages to .... through the nerves

22) The eyes of fishing cats have a mirror like membrane bounces off light and this is considered .... adaptation

23) Light travels in .... lines

24) Fireflies' beetles use the sense of .... to communicate with each other

25) In gas oven, ... energy changes into ....energy

26) The energy which is stored in a ball at the top of a hill is ....potential energy

27) When the speed of a car increases, its .... energy increases

28) Most of .... energy in newton's cradle is transferred from the first ball to the rest of balls

29) Among safety equipment's used during collisions of cars are .... and ....

30) When two cars move on the same road, car A moves at a speed equal to 10 m/sec and car B moves at a speed equal to 20 m/sec this means that car .... moves longer distance than car .... at the same time

31) Television operates by .... energy and it produces.................... and .... energies

32) When a moving car hits a tree, a part of .... energy of the car changes into a .... energy that you can hear

33) Engineers use .... to slow down the motion of the shockwave truck

34) The speed affects the .... energy of a moving object

35) In the electric bell, ... energy changes into............................ energy

Question 5: write the scientific term

1) A structural adaptation that fixes the kapok tree in soggy soil and supports its trunk (   )
2) It delivers messages between the spinal cord and different body organs (   )
3) An animal that can turn its head backwards and has a bowl-shaped face and large eyes (   )
4) The time taken by an organism's body to respond to different reactions (   )
5) A group of ants which is responsible for sending smelly messages when there is a shortage of food (   )
6) A structural adaptation that prevents the loss of water in the pine tree (   )
7) The organ used to differentiate between different scents (   )
8) They include the eyes, nose, ears, tongue and skin and they receive information from the surroundings and send it to the brain (   )
9) A large muscle that contracts during breathing in and relaxes during breathing out (   )
10) A property that helps animals blend in with their surrounding environments (   )
11) A system that controls all body functions and nerves are one of its parts (   )
12) A type of foxes that has sandy colored fur to adapt its desert environment (   )





13) A plant lives in salt water and has long strong roots to resist the water waves ( )
14) An organ in the human digestive system that has tiny blood vessels to absorb the nutrients through its walls ( )
15) A feature in the bull shark in which the upper surface of its body is darker than its lower surface ( )
16) The organ used to differentiate between the taste of different types of food ( )
17) A process through which the body gets oxygen from the air and expels out carbon dioxide ( )
18) An animal that has multiple bright colors to provide camouflage in its environment and has a v shaped foot ( )
19) A group of ants which is responsible for protecting the colony from dangers ( )
20) An animal that has a thin layer of fat and dense feathers to adapt extreme cold weather ( )
21) A gas present in air and water and is important for breathing ( )
22) The organ through which solid wastes leave the body ( )
23) The process of breaking down food into smaller parts ( )
24) It is the force that pulls objects toward the center of the Earth ( )



25) A type of surface that reflects light in different directions when the light falls on it (   )
26) A body that appears lighted in the sky but not a source of light
(   )
27) The visible form of energy that enable us to see (   )
28) Materials that allow light to pass through (   )
29) Sense organs that detect light energy (   )
30) The form of energy that increases when the speed of an object increases (   )
31) The energy that is stored in an object due to its position at a certain height from the earth's surface (   )
32) The ability to do work or cause a change (   )
33) The energy that the object gains due to its motion
(   )
34) A heavy steel ball that swing on a cable and is used in destruction of parts of the buildings (   )
35) The liquid that stores chemical energy and it is used to move cars (   )
36) The energy that is stored in food and batteries (   )
37) Safety equipment used to provide soft cushion when it is inflated automatically with a gas during collision of cars
(   )
38) The energy that is used to operate television (   )
39) The force that makes an object moves a distance (   )
40) It is the force that is exerted when objects rub against each other (   )

41) One of the measuring units of time (   )
42) The process in which two objects bump or crash into each other including energy transfer (   )

Question 6: Give reason for the following

1) branches of acacia tree are gathered on the top of its trunk
2) Some animals have the ability to make camouflage adaptation
3) The inhaled air differs from the exhaled air
4) Fennec fox has extra large ears while arctic fox has short ears
5) The leaves of plants that float above the surface of water are so wide
6) Barbary fig has sharp spines
7) Mangrove tree has long and strong roots
8) Panther chameleon has a V shaped feet and a long tail
9) when your friend catches a ball that is thrown in the air, the movement of the ball is stopped
10) A mirror can reflect the light better than a painted surface.
11) Candle is considered as a source of light
12) A truck needs a bigger engine that that of a small car to move with the same speed
13) When two objects collide together, you can hear a sound

Q7: cross out the odd word

1- Penguin – polar bear – Fennec fox – Arctic Fox
2- Nose- Throat- Trachea – Anus
3- The sun- the moon- fire- candle
4- Bats- fireflies- blind person’s cane- dolphins
5- Guitar – flashlight- radio – alarm bell

Q8: answer the following

1- Find the speed of a runner if you know that he covers 300 meters in 30 seconds

2- A truck travels a distance of 160 km in 2 hours. Find its speed

3- Find the speed of a car moves a distance of 420 kilometers in 3 hours





Question 1: choose the correct answer

1- Adaptation helps living organisms in all of the following Except ....

a) Surviving b) reproduction c) hiding d) death

2- Penguins' feet have blood vessels that bring .... up from feet towards its body

a) Cold water b) warm water c) cold blood d) warm blood

3- Fennec Fox and caracal have .... that help them blend in with the desert

a) Colorful scales b) thick white fur c) sandy colored Fur

4- The panting of fennec fox is considered ....

a) Only structural b) only behavioral c) both of them

5- All the following properties help the arctic fox to stay warm except ....

a) Thick fur coat b) tan colored c) short ears and legs

6- One of the behavioral adaptations of acacia tree is that ....

a) Has one very long root
b) Has sharp spines around its leaves
c) Produce poison to make the leaves taste bad

7- Mangrove trees have long and strong roots to ....

a) Resist the strong wind
b) Resist the water waves
c) Prevent loss of water





8- All the following are organs of the digestive system except ....

a) Mouth b) nose c) stomach d) esophagus

9- Crushing the food in the mouse is the function of ....

a) Stomach b) tongue c) saliva d) teeth

10- The undigested food passes from the small intestine to ....

a) Liver b) pancreas c) large intestine

11- The passage of air during inhalation is ....

a) Throat – nose -lungs -trachea
b) Lungs – nose-trachea -throat
c) Nose-throat-trachea-lungs

12- Both human and fish ....

a) Can breathe in air
b) Can breathe in water
c) Use oxygen gas to breathe
d) Use carbon dioxide gas to breathe

13- The negative effects of human activities on human health are ....

a) Lung damage and asthma
b) Asthma and wounds
c) Heart problems and wounds

14- Animals that become active at night are called

a) Extinct animals
b) Endangered animals
c) Nocturnal animals



15- The root of kapok tree doesn't grow deeply in the soil because................

a) The soil contains less water

b) The soil contains more water

c)The climate is very cold

d)The climate is very hot

16-The system responsible for moving your hand away from danger such as touching a hot cup of tea is the .... system

a) Digestive system

b) Respiratory system

c)Nervous system

d)Stomach

17- Songs of humpback whales in winter are characterized by each of the following except

a) It is for mating season

b) Moving better through cold water

c)Having soft sounds

d)Having low pitched sounds





18- Humans can help restore the ecosystem by all of the following activities except ....

a) Replanting the cleared forests

b) Removing air and water pollutants

c)Producing more factories exhausts

d)Preserving existed plants and animals

19-In penguins' body, the insulting layer of fat and dense feathers trap .... against the skin

a) Cold air

b) Cold water

c)Warm water

d)Warm air

20-.................... is considered as a behavioral adaptation in the panther chameleon

a) Puffing up its body during danger

b) Each eye can move independently

c)V shaped feet

d)Long sticky tongue

21-From the structural adaptation of water lily plant is that ....

a) It has long roots

b) It has sharp spines

c)It has tiny leaves

d)It has wide leaves

22- Bears that live in forests have fur .... that of polar bears

a) Whiter than

b) Darker than

c)Similar to

d)Brighter than

23-All the following properties are considered as structural adaptations in the panther chameleon except ....

a) Each eye can move independently

b) Opening its mouth wide at danger

c)V shaped feet

d)Long sticky tongue

24- Pine tree has a triangular shape to make snow slide over its branches without breaking it. This structural adaptation makes the tree face the extreme cold climate like the feet of ....

a) Caracal

b) Penguin

c)Fennec fox

d)Brown bear

25-Camouflage means that animal ....

a) Can be seen easily among its surroundings

b) Is hard to be seen among its surroundings

c)Is easily to be seen by its preys

d)Can be seen easily by its predators

26-The five senses of humans and animals include

a) Sight-hearing-touch-smell-movement

b) Sight-movement- taste-touch-smell

c)Taste-touch-movement-hearing-smell

d)Sight-hearing-taste-smell-touch

27- Umbrella shaped trees include

a) Mangrove tree and acacia tree

b) Mangrove tree and kapok tree

c)Acacia tree and kapok tree





28-fennec foxes and arctic foxes live in barrows, this belongs to .... adaptation

a) Only structural

b) Only behavioral

c)Both structural and behavioral

d)Neither structural nor behavioral

29-The blind person's cane and .... emit a high-pitched sound that bounces off objects forming an echo

a) Lizards

b) Polar bears

c)Bull sharks

d)Bats

30-The nervous system can do all the following functions except........

a) Gathering information

b) Processing information

c)Sending signals

d)Falling of rains





31-One of the behavioral adaptations that helps the animal to protect itself from enemies

a) Camouflage

b) Extinction

c)Migration

d)Reproduction

32-bats are .... animals

a) nocturnal

b) morning

c)not hearing

d)not flying

33-The roots of palm plants help them to ....

a) Stand strong against the wind

b) Reach the underground water

c)Fixing plants in the soil

d)All the above

34-................ is covering the body of arctic fox

a) Heavy skin

b) thick fur

c)Many feathers





35-................. are panting to lower their body temperature

a) Whales

b) Owls

c)Foxes

d)Bats

36-what happens to the living organisms that cannot adapt to the conditions of their environment

a) Their number increases

b) They can’t stay in the environment

c)They keep their number constant

d)They can survive in the environment

37-the system that helps us to translate messages that come from our surroundings such as smells and sound

a) Respiratory

b) Digestive

c)Nervous

d)Circulatory

38-the organ responsible for the sight sense is ....

a) The ear

b) The tongue

c)The nose

d)The eye

39-an animal has the ability to turn its head in all directions is the

a) Snake

b) Jerboa

c)Dolphin

d)Owl

40-all of the following are components of the nervous system except

a) Spinal cord

b) Heart

c)Nerves

d)Brain

41- the nervous system of mammals consists of ....

a) Brain only
b) Spinal cord only
c) Nerves and spinal cord
d) Brain, spinal cord and nerves

42- owls have all the following properties to sense distant prey except ....

a) Large eyes
b) Bowl shaped face
c) Head turns in all directions
d) Weak sense of hearing

43- if you smell smoke from something burning nearby then you realize you have to move away fast. This mean there is an integration between .... in this situation

a) Digestive and respiratory system
b) Digestive and nervous system
c) Respiratory and nervous system

44- sense organs collect information and send signals to .... for processing and understanding

a) Hands b) legs c) brain d) stomach

45-................... use echolocation by bouncing high bitched sound in air

a) Bats b) dolphins c) whales





46- When you move something toward you, this represents ....

a) Pushing force

b) Pulling force

c) Light energy

d) Sound energy

47- Displaying light is a type of communication that is found in

a) Plants only

b) Plants and humans

c) Animal and humans

d) Animals only

48- all the following are examples of motion except.............

a) A running person

b) A ball traveling through the air

c) A flying bird

d) A sleeping dog

49- Reading and writing are common types of communication in the .... world

a) Humans

b) Animals

c) Birds

d) Plants

50- When an object is in motion, this means that its .... changes

a) Color

b) Shape

c) Size

d) Position

51- If there is nothing to stop the movement of an object, this object will ....

a) Stay in motion

b) Suddenly stop

c) Stop after few minutes

d) Stop after few seconds





52- Push or pull actions are considered as types of ....

a) Force

b) Device

c) Energy

d) Adaptation

53- Animals can communicate with each other through ....

a) Sounds and lights

b) Talking

c) Reading

d) Writing

54- which of the following allows light to pass through it

a) a rock

b) moon

c) fire

d) Glass





55- which of the following is a source of light

a) eye

b) moon

c) fire

d) mirror

56- raising the thumb up or lower it down is a kind of

a) colors

b) codes

c) waves

d) lights

57- when a light falls on a dark surface, ...

a) The surface absorbs the light

b) Light passes through it

c) The light is refracted

d) Nothing happens

58- all the following are examples of pulling force except

a) Kicking a ball

b) Pulling the rope

c) Opening the desk's drawer

d) Lifting up your bag





59- all the following represents the pushing force except

a) Kick a ball

b) Press on electrical switch

c) Close the desk's drawer

d) Lifting up a bag

60- the organ responsible for the sight sense is ....

a) The ear

b) The tongue

c) The nose

d) The eye

61- the force that pulls the objects down toward the center of the Earth is ....

a) Gravity

b) Pushing

c) Water

d) Wind





62- objects need force to move, this force is represented in ....

a) Pushing only

b) Pulling only

c) Pushing and pulling together

d) The Earth gravity only

63- when a ball stands on the ground without moving, the forces acting on it are ....

a) Balanced

b) Un balanced

c) Push it up

d) Not equal

64- from the opaque objects

a) Cartoon

b) Glass

c) air

65- from the organs that we can use to send or receive the code ....

a) Heart

b) Ear

c) Leg





66- which of the following organs can work together for seeing different objects

a) Nose and brain

b) Eyes and brain

c) Ears and brain

67- the eyes of fishing cat glow in the dark because their eyes..........

a) Emit their own light

b) Can reflect light

c) Are small in size

d) Have narrow pupils

68- when light rays hit an object, all the following are correct except

a) Some of the rays are absorbed by the object

b) Some of the rays are bounced off the object

c) Some of the rays may go through the objects

d) All the rays are absorbed by the object

69- all the following are forms of codes except ....

a) Thumb up and down

b) Face expressions

c) Writing

d) Swimming

70- When you sit on a chair, the force of gravity is .... and holding you in the chair

a) Pulling you upward

b) Pulling you downward

c) Pushing you upward

d) Pushing you downward

71- The force that occurs when an object rubs against another object is called

a) Friction

b) Gravity

c) Push

d) Pull

72- When an object moves down a ramp, its stored potential energy ....

a) Increases

b) Does not change

c) Changes to less active form of energy

d) Changes to a more active form of energy

73- The energy that is stored in an object due to its position is ....

a) Kinetic

b) Potential

c) Electrical

d) Chemical

74- The potential energy of an object depends on ....

a) Its mass only

b) Its height from the earth surface

c) Its mass and height from Earth surfaces

d) Its temperature

75- All types of energy can be classified into two main groups which are.............

a) Light energy and sound energy

b) Chemical energy and electrical energy

c) Potential energy and kinetic energy

d) Magnetic energy and thermal energy

76- Chemical energy can be stored in ....

a) Food only

b) Battery only

c) Television and food

d) Food and battery

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c) It slows down or stops the moving objects

d) It doesn't affect the moving objects

Question 2: put true or false

1) Digestion process begins in stomach with the help of saliva (F)
2) Living organisms can adapt their environment conditions through structural adaptation and behavioral adaptation (T)
3) Food passes from mouth to stomach through a narrow tube called small intestine (F)
4) The Egyptian Jerboa can jump long distances depending on its long hind legs (T)
5) The behavioral adaptation is a change in the body structure of a living organism to survive (F)
6) Sharp spines are adaptation of different plants to prevent animals from eating them (T)
7) During exhalation, the diaphragm expands (T)
8) The sandy colored fur of caracal helps it blend in with snow in polar environment (F)
9) The inhaled air is rich in carbon dioxide while the exhaled air is rich in oxygen (F)





10) In penguin’s feet, the cold blood vessels can warm up the warm blood vessels (F)
11) Camouflage helps animals adapt the extreme weather conditions in their ecosystem (F)
12) Amphibians includes frogs and salamanders (T)
13) Some animals prefer hunting during the night than hunting during the day (T)
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16) The desert lizard blends in with large green trees, to hide from its enemies (F)
17) Humpback whales produce more than one type of songs (T)
18) Exhaled air carries oxygen (F)
19) Hand shaped leaves of kapok tree is considered behavioral adaptation (F)
20) A person can identify spoiled food through the touch sense (F)
21) The migration of birds to search for food is behavioral adaptation (T)
22) The skin is the sensory organ that makes you feel the smoothness of the cloth (T)
23) The respiratory system is responsible for the entry of air into the body (T)
24) Dolphins have strong sight sense (F)

25) Some animals can see at night (T)
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32) The ears or arctic fox are larger than of those of fennec fox (F)
33) All types of sharks live in fresh water (F)
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35) Acacia has long wide roots called buttress roots (F)
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38) The main difference between pulling and pushing forces is the direction of the force (T)
39) At night, cats' eyes look like small lighted lamps (T)
40) Unbalanced forces keep an object in its place without moving (F)
41) When a car crashes into a wall, it will not stop (F)

42) When a car runs out of fuel on a flat road, its speed increases gradually until it stops (F)
43) The moon is considered as a light source (F)
44) in a complete dark room, you can use the sense of touching, tasting, smelling, and hearing only (T)
45) Wood is a transparent object that allows light to pass through it (F)
46) The seesaw moves up and down because the forces acting on it are unbalances (T)
47) Some animals can see at night (T)
48) When the position of a body changes according to a fixed point, the body moves (T)
49) Light travels in straight lines (T)
50) Red and green traffic lights are considered codes (T)
51) Gravity pulls objects towards the center of the Earth (T)
52) The brain is responsible for processing information (T)
53) Both humans and animal don’t need a source of light to see (F)
54) Speaking is the only way to communicate with people (F)
55) Hitting tennis ball needs a pulling force (F)
56) The moving object only have energy, while the objects that don’t move have no energy (F)
57) As the height of an object from the Earth’s increase, its potential energy increases (T)
58) Any moving object has a form of energy known as kinetic energy (T)

59) We can measure the distance in kilometer unit (T)
60) The chemical energy in batteries can be converted into electrical energy (T)
61) In the electric fan, the kinetic energy is converted into electrical energy (F)
62) When the roller coaster slides down fast, its kinetic energy increases (T)
63) The force that slows down or decrease the speed of an object is gravity (F)
64) If two objects cover the same distance at the same time, so they have the same speed (T)
65) After collision, the airbags deflate as fast as they inflate (T)
66) The bus that covers 60 kilometers in 1 hour has a speed = 60 m/sec (F)

Question 3: What happens if

1) The diaphragm moves down during inhalation while it moves up during exhalation
During inhalation, the size of the chest increases and the air rich in oxygen gas enters the lungs. During exhalation the size of the chest decreases and the air rich in carbon dioxide gas comes out of the lung
2) The length of acacia taproot doesn't exceed 3 meters downward
It cannot search for water in the deep soil





3) The amount of food in the ant's colony decreases
   The nurse ants send a smelly message to the scout ants to alert the ants where to find food
4) Bats cannot use echolocation property
   They cannot communicate with each other or locating the objects by the sense of hearing
5) Light falls on a mirror that has few cracks
   Light rays are reflected in different directions
6) You are standing on the ground, and you let a ball out of your hand
   It will fall down due to the pulling force of gravity
7) The mirror like membrane of a fishing cat is not present
   Fishing cat cannot see or hunt at night
8) Light falls on a transparent body such as a glass window
   Light passes through the glass window
9) A firefly wants to attract a mate
   It produces a chemical reaction inside its body to light up and attract a mate
10) Speed of a car increases (according to kinetic energy)
    The kinetic energy increases
11) Friction occurs between the string and the other parts of newton's cradle during collision (according to the change of energy)
    Some of the kinetic energy changes into thermal energy




Question 4: complete the following sentences

1) As the pollution rate of water in ponds and air increases, the number of amphibians .... decrease..............
2) The hand shaped leaves of kapok tree allow ...wind......... to flow through them gently
3) The leaves of water lilies are wider in order to .... float.............. on the water surface and to absorb a large amount of ....sunlight..........
4) The....nose........ is the organ that sends information to the brain when you smell the odor of a perfume
5) During swallowing, the food passes from the throat to the ....esophagus.......... then to the ......stomach............. inside your digestive system
6) During inhalation, air travels down from your throat to your lungs through .... trachea..........
7) On hearing an alarm ring, the sensory receptors that are found in the ....ears........... send a message through a network of nerves to the .... brain....... which determines what to do to avoid danger
8) When you touch a very hot object, your hands move quickly away, this action is called ......reflex..........
9) Among animals that can live in polar environment are ...polar bear........ and .... penguin..........
10) Echolocation is a type of communication that depends on the sense of ....hearing............ and it is used by some animals such as. bats.... and ......dolphins..............

11) Humans, amphibians, and reptiles have .... lungs............ to breath oxygen gas in air
12) Owls can detect prey by using the sharp senses of .... sight.......... and ......hearing..........
13) During exhalation .... carbon dioxide......... gas comes out of the lung
14) Fish have ...gills........ to breathe under water while frogs use their ...skin....... to breath in water
15) The spinal cord is an important organ of the ...nervous............. system
16) The eye sends messages to ....brain......... through the nerves
17) Bats use ......echolocation............ as a mean of communication with each other
18) A tube with muscles that help to push food into the stomach is called .... esophagus...........
19) Air enters the human body through .... respiratory............... system
20) The different languages are considered as ...codes...........
21) The eye sends messages to ......brain............. through the nerves
22) The eyes of fishing cats have a mirror like membrane bounces off light and this is considered .... structural............. adaptation
23) Light travels in ....straight.................. lines
24) Fireflies' beetles use the sense of ...sight......... to communicate with each other

25) In gas oven, ...chemical........... energy changes into ......thermal..........energy
26) The energy which is stored in a ball at the top of a hill is ....gravitational ....potential energy
27) When the speed of a car increases, its ......kinetic........... energy increases
28) Most of .... kinetic.............. energy in newton's cradle is transferred from the first ball to the rest of balls
29) Among safety equipment's used during collisions of cars are ......seatbelt......... and ......airbags................
30) When two cars move on the same road, car A moves at a speed equal to 10 m/sec and car B moves at a speed equal to 20 m/sec this means that car ....b............. moves longer distance than car ....a............ at the same time
31) Television operates by ....electrical.............. energy and it produces.... light............... and ....sound............. energies
32) When a moving car hits a tree, a part of. kinetic......... energy of the car changes into a ....sound........... energy that you can hear
33) Engineers use ......parachutes................ to slow down the motion of the shockwave truck
34) The speed affects the ......kinetic................ energy of a moving object
35) In the electric bell, ... electrical............. energy changes into.........sound................. energy

Question 5: write the scientific term

1) A structural adaptation that fixes the kapok tree in soggy soil and supports its trunk (Buttress root)
2) It delivers messages between the spinal cord and different body organs (nerves)
3) An animal that can turn its head backwards and has a bowl-shaped face and large eyes (owl)
4) The time taken by an organism's body to respond to different reactions (reaction time)
5) A group of ants which is responsible for sending smelly messages when there is a shortage of food (nurse ants)
6) A structural adaptation that prevents the loss of water in the pine tree (needle leaves)
7) The organ used to differentiate between different scents (nose)
8) They include the eyes, nose, ears, tongue and skin and they receive information from the surroundings and send it to the brain (sensory organs)
9) A large muscle that contracts during breathing in and relaxes during breathing out (diaphragm)
10) A property that helps animals blend in with their surrounding environments (camouflage)
11) A system that controls all body functions and nerves are one of its parts (nervous system)
12) A type of foxes that has sandy colored fur to adapt its desert environment (fennec fox)





13) A plant lives in salt water and has long strong roots to resist the water waves (mangrove tree)
14) An organ in the human digestive system that has tiny blood vessels to absorb the nutrients through its walls (small intestine)
15) A feature in the bull shark in which the upper surface of its body is darker than its lower surface (countershading)
16) The organ used to differentiate between the taste of different types of food (tongue)
17) A process through which the body gets oxygen from the air and expels out carbon dioxide (respiration)
18) An animal that has multiple bright colors to provide camouflage in its environment and has a v shaped foot (panther chameleon)
19) A group of ants which is responsible for protecting the colony from dangers (solider ants)
20) An animal that has a thin layer of fat and dense feathers to adapt extreme cold weather (penguin)
21) A gas present in air and water and is important for breathing (oxygen)
22) The organ through which solid wastes leave the body (anus)
23) The process of breaking down food into smaller parts (digestion)
24) It is the force that pulls objects toward the center of the Earth (gravity)

25) A type of surface that reflects light in different directions when the light falls on it (rough)
26) A body that appears lighted in the sky but not a source of light (moon)
27) The visible form of energy that enable us to see (light)
28) Materials that allow light to pass through (transparent)
29) Sense organs that detect light energy (eyes)
30) The form of energy that increases when the speed of an object increases (kinetic energy)
31) The energy that is stored in an object due to its position at a certain height from the earth's surface (potential energy)
32) The ability to do work or cause a change (energy)
33) The energy that the object gains due to its motion (kinetic energy)
34) A heavy steel ball that swings on a cable and is used in destruction of parts of the buildings (wrecking ball)
35) The liquid that stores chemical energy and it is used to move cars (gasoline)
36) The energy that is stored in food and batteries (chemical)
37) Safety equipment used to provide soft cushion when it is inflated automatically with a gas during collision of cars (airbags)
38) The energy that is used to operate television (electrical)
39) The force that makes an object moves a distance (work)
40) It is the force that is exerted when objects rub against each other (friction)

41) One of the measuring units of time (hour or second)
42) The process in which two objects bump or crash into each other including energy transfer (collision)

Question 6: Give reason for the following

1) branches of acacia tree are gathered on the top of its trunk
   To prevent animals from reaching their leaves and eating it
2) Some animals have the ability to make camouflage adaptation
   To hide from their predators or prey in different environments
3) The inhaled air differs from the exhaled air
   Because the inhaled air is rich in oxygen gas while the exhaled air is rich in carbon dioxide gas
4) Fennec fox has extra large ears while arctic fox has short ears
   To help Fennec fox to lose heat and cool its body while arctic fox to stay warm
5) The leaves of plants that float above the surface of water are so wide
   To absorb a large amount of sunlight
6) Barbary fig has sharp spines
   To prevent animals from eating its fruits and leaves
7) Mangrove tree has long and strong roots
   To resist the water waves

8) Panther chameleon has a V shaped feet and a long tail
To hold tightly the branches of trees
9) when your friend catches a ball that is thrown in the air, the movement of the ball is stopped
Because of the pushing force of his hand
10) A mirror can reflect the light better than a painted surface.
Because the mirror is smoother than the painted surface
11) Candle is considered as a source of light
Because it gives off their own light
12) A truck needs a bigger engine than that of a small car to move with the same speed
Because the truck has more mass than the car
13) When two objects collide together, you can hear a sound
Because part of the kinetic energy changes into sound energy

Q7: cross out the odd word

1- Penguin – polar bear – Fennec fox – Arctic Fox
2- Nose- Throat- Trachea – Anus
3- The sun- the moon- fire- candle
4- Bats- fireflies- blind person's cane- dolphins
5- Guitar – flashlight- radio – alarm bell

Q8: answer the following

1- Find the speed of a runner if you know that he covers 300 meters in 30 seconds

Speed= 10 m/s

2- A truck travels a distance of 160 km in 2 hours. Find its speed

Speed=80 km/hr.

3- Find the speed of a car moves a distance of 420 kilometers in 3 hours

Speed=140 km/hr.







كيفية طباعة صفحات معينة من ملف معين



مثلا ازاى نطبع الصفحات من صفحة 4 الى صفحة 9

خطوة 1

خطوة 2 اختيار اسم الطابعة بتاعتك

خطوة 3 كتابة الصفحات المراد طباعتها نكتب رقم 4 ثم نكتب الشرطة دي ــ ثم نكتب 9

خطوة 4 اختيار نوع الورق

خطوة 5 اختيار A4

خطوة 6